

U. S. DEPARTMENT OF AGRICULTURE.
WEATHER BUREAU.

THE
CLIMATE OF SAN FRANCISCO, CALIFORNIA.

Prepared under direction of
WILLIS L. MOORE,
Chief United States Weather Bureau,

BY

ALEXANDER G. MADIE and GEORGE H. WILLSON.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
WEATHER BUREAU,
Washington, D. C., November 11, 1899.

Hon. JAMES WILSON,
Secretary of Agriculture.

SIR: I have the honor to submit herewith the manuscript of a paper entitled, "The Climate of San Francisco, Cal.," by Alexander G. McAdie, forecast official, and George H. Willson, local forecast official, and to recommend its publication as a bulletin of the Weather Bureau.

The climatic characteristics of the Pacific coast and the peculiar local environment of San Francisco combine to make a report of this character both interesting and instructive. The authors have presented the climatological data accumulated at the San Francisco station during the last thirty years in considerable detail, yet not more so than is warranted by the lack of such information and the relative importance of San Francisco as an objective point for many of our citizens who visit the Pacific coast.

Very respectfully,

WILLIS L. MOORE,
Chief United States Weather Bureau.

Approved:

JAMES WILSON, *Secretary.*

THE CLIMATE OF SAN FRANCISCO.

The city of San Francisco is justly famed for its peculiar climate. To a large degree the topography of a section controls its climate, and it is not surprising, therefore, to find that in the vicinity of San Francisco the topography is exceedingly diversified.

From the Weather Bureau station on Mount Tamalpais—elevation of station, 2,373 feet¹—one looks down to the west on the broad expanse of the Pacific. From the open roadstead of Drakes Bay the eye passes over the Sausalito Hills to the headlands at Points Bonita and Lobos, marking the entrance to the Golden Gate. This passage plays an important rôle in connection with the winds, temperature, and fogs of the San Francisco Bay region. At mean tide the area of San Francisco Bay is about 450 square miles.

Far on the eastern horizon, especially on clear winter days, the snows of the Sierras, 155 miles distant, can be seen glistening. These mountains vary in height from 8,000 to 14,000 feet.

Extending from the slopes of the Sierras to the Coast Range is a great basin, 500 miles long and about 50 wide. The Sacramento and the San Joaquin rivers flowing through this basin unite in Suisun Bay. This great inland basin, surrounded by mountain walls, is connected with the Pacific Ocean by the Gate at San Francisco, San Francisco Bay, San Pablo Bay, Carquinez Straits, and Suisun Bay.

If a native of San Francisco were asked which was the coldest month of the year, he might be unable to answer, and if asked which was the warmest he might say November. This confusion arises from the comparatively small range of temperature. The mean annual temperature, as determined from the records of the Weather Bureau for 28 years, is 56.2°. May and November have practically the same temperature. The warmest month is September, 60.9°; the coldest January, 50.1°; the other months have mean temperatures as follows: February, 52°; March, 54°; April, 55°; May, 57°; June, 59°; August, 59°; October, 60°; November, 56°; December, 52°.

The highest temperature ever recorded in San Francisco was 100° on June 29, 1891, and the lowest 29° on January 15, 1888. Abnormally warm and cold periods last, as a rule, about three days. The mean of the three consecutive warmest days at San Francisco has never exceeded

¹ West Peak, 2,604; Middle Peak, 2,520; East Peak, 2,592; latitude, 37° 56' N.; longitude, 122° 36' W.

76.3°. A period of warm weather during the summer months is, as a rule, brought to a close about the evening of the third day with strong west winds, dense fog, and temperatures ranging from 49° to 54°. The mean of the three consecutive coldest days was 40.7°. The greatest daily range of temperature was 43° on June 29, 1891. This was the date when the temperature reached 100°. The range of temperature was from 100° to 57°. The morning was calm and very warm while at 5 p. m. the temperature was 80° and next morning 74°.

Since the establishment of the Weather Bureau on Mount Tamalpais it has been evident that the conditions at San Francisco are those of sea level, while very different and more normal conditions prevail at elevations of several thousand feet. Thus, the mean monthly temperatures of San Francisco and Mount Tamalpais show that the seasonal changes are masked at the lower station while plainly marked at the upper:

1898.

| | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Mean. |
|--------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|-------|
| Mount Tamalpais | 40.8 | 46.4 | 46.6 | 56.0 | 50.5 | 61.9 | 70.0 | 67.5 | 62.6 | 59.4 | 51.2 | 45.7 | 54.9 |
| San Francisco..... | 46.7 | 52.6 | 51.2 | 54.5 | 52.6 | 59.0 | 56.0 | 58.0 | 59.0 | 61.2 | 55.4 | 49.7 | 54.7 |

The difference in temperature on summer days is often very great. During the month of June, 1899, an attempt was made to use this vertical thermal gradient in practical forecasting. It would perhaps be more accurate to describe this difference as a thermal decrement, since it is largely a cooling due to the proximity of the Pacific with its 16,000,000 square miles of water, the mean temperature of the ocean water along the northern coast of California averaging 55°.

Including every day in the month of June there was found to be a mean daily difference of 11.4°, or, in other words, from the data obtained by means of this mountain station, checked by data from Point Reyes and Mount Hamilton, the temperature rose at the rate of 1° for every 203 feet of elevation. This increase held at least up to 2,380 feet.

If we consider only those days in the month (24) when there was a rise with elevation, we have for the mean daily difference in temperature between Mount Tamalpais and San Francisco 15.3°; i. e., the temperature rises 1° for every 155 feet elevation. This may be adopted as a working normal summer-day gradient.

For days when there was a decrease in temperature with elevation, 6 in all, we find a difference of 5.9°, or there was 1° fall for every 402 feet, which it may be noted is not quite as steep a gradient as values generally given in text-books—1° for every 300 feet.

We notice first that periods of rainy or cloudy and cold weather occur when the surface temperatures are higher than those of the upper level. It would seem as if at these times the different air strata from sea level to 2,500 feet had been intermingled to some degree, and

the cold layer usually existing close to the surface had been temporarily displaced.

Fogs seem to occur at times of steep inverted gradients; in other words, when the temperature of the 2,500-foot level is considerably higher than at sea level.

The summer fogs of San Francisco result from a chilling of the upper warm air, descending to the ocean surface, and particularly over the cold current close to the shore. There is a great difference of temperature between the valley and the ocean, often 50° within as many miles, and this is probably the prime factor in establishing a marked air movement, shown by the strong indraft through the Gate on summer afternoons (see charts of hourly wind velocity, 3 to 7 p. m.).

An interesting instance of the effect of fog in lowering the temperature occurred on July 25, 1899. At Mount Tamalpais at about 4 a. m. the temperature was 64° ; at 5 a. m. the fog rose until it reached a height of 2,200 feet and the temperature fell to 47° . The temperature at San Francisco at the same hour was 54° .

Passing from the fogs of the summer months, the seasonal character of the rainfall demands attention. Referring to the tables and charts accompanying, it will be seen that July and August are practically without rain, while December and January together have nearly 10 inches. The annual rainfall is 23 inches.

By comparing the seasonal rainfall with the crop yield it would appear that in years when the rain falls generously in March and April the yield is largest, other things being equal. In other words, it is the time distribution of the rain, more than the intensity or total rainfall, which benefits vegetation.

The Weather Bureau (Signal Service) office was originally located in the Merchants' Exchange Building, and the first observation taken February 2, 1871. The office was moved to the Phelan Building September 4, 1890. On November 1, 1892, it was moved to its present quarters in the Mills Building.

The present elevations of instruments above the ground are, thermometers 161 feet, rain gauge 154 feet.

Monthly mean temperatures.

| | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Annual. |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 1871 | 52.2 | 54.2 | 51.3 | 53.3 | 54.3 | 56.9 | 56.6 | 57.9 | 60.4 | 61.8 | 55.1 | 52.9 | 56.0 |
| 1872 | 54.8 | 50.9 | 53.4 | 53.6 | 56.0 | 59.8 | 57.9 | 59.8 | 59.3 | 58.8 | 56.0 | 52.1 | 56.2 |
| 1873 | 49.3 | 51.2 | 50.9 | 54.6 | 55.4 | 57.1 | 57.8 | 59.5 | 58.3 | 59.7 | 57.7 | 50.7 | 55.9 |
| 1874 | 48.8 | 52.0 | 51.8 | 54.9 | 57.6 | 58.1 | 57.8 | 59.0 | 61.3 | 59.8 | 56.1 | 50.3 | 55.6 |
| 1875 | 48.8 | 52.8 | 51.8 | 55.4 | 57.2 | 59.4 | 58.8 | 58.8 | 59.2 | 62.0 | 57.1 | 51.4 | 56.0 |
| 1876 | 54.3 | 55.8 | 53.2 | 54.4 | 56.2 | 61.4 | 59.1 | 59.6 | 61.5 | 59.9 | 58.0 | 53.0 | 56.6 |
| 1877 | 52.8 | 54.3 | 57.2 | 54.4 | 56.2 | 62.0 | 60.8 | 59.8 | 62.5 | 59.2 | 57.2 | 52.7 | 57.7 |
| 1878 | 48.8 | 52.8 | 55.9 | 56.0 | 58.8 | 58.8 | 58.6 | 59.1 | 60.2 | 61.0 | 57.1 | 51.6 | 56.9 |
| 1879 | 48.8 | 54.6 | 57.2 | 50.5 | 56.4 | 60.2 | 58.7 | 66.5 | 61.0 | 59.8 | 55.0 | 50.0 | 56.7 |
| 1880 | 48.0 | 48.0 | 53.3 | 57.7 | 58.8 | 57.2 | 58.8 | 59.1 | 58.9 | 59.8 | 54.2 | 53.2 | 54.9 |
| 1881 | 55.3 | 55.3 | 54.4 | 57.9 | 58.0 | 58.6 | 59.7 | 58.8 | 59.7 | 56.6 | 55.1 | 51.0 | 56.6 |
| 1882 | 49.4 | 48.8 | 53.4 | 53.0 | 57.0 | 57.9 | 59.5 | 58.6 | 59.8 | 58.8 | 53.2 | 52.8 | 55.2 |
| 1883 | 47.0 | 48.0 | 53.2 | 53.2 | 58.0 | 61.4 | 59.8 | 59.2 | 63.1 | 57.9 | 54.1 | 50.8 | 55.6 |
| 1884 | 50.6 | 54.5 | 50.4 | 56.0 | 59.4 | 60.2 | 61.4 | 60.0 | 59.6 | 58.2 | 57.4 | 52.8 | 56.7 |
| 1885 | 51.1 | 55.3 | 57.7 | 58.2 | 58.1 | 57.8 | 61.6 | 59.6 | 61.8 | 60.7 | 57.8 | 54.6 | 57.8 |
| 1886 | 51.2 | 56.8 | 53.6 | 55.4 | 59.1 | 59.4 | 60.3 | 60.6 | 62.4 | 58.6 | 56.8 | 53.6 | 57.3 |
| 1887 | 52.6 | 47.8 | 55.8 | 55.8 | 57.0 | 59.4 | 56.6 | 57.8 | 62.0 | 64.2 | 56.4 | 52.2 | 56.5 |
| 1888 | 46.7 | 53.9 | 53.4 | 57.8 | 56.9 | 62.4 | 61.4 | 60.8 | 62.6 | 61.6 | 57.0 | 53.2 | 57.3 |
| 1889 | 50.4 | 54.0 | 57.2 | 56.8 | 58.8 | 62.4 | 58.8 | 60.4 | 64.6 | 61.8 | 58.0 | 51.3 | 57.9 |
| 1890 | 46.2 | 49.1 | 53.8 | 54.8 | 59.8 | 59.2 | 59.8 | 61.4 | 60.4 | 62.4 | 58.0 | 49.8 | 56.3 |
| 1891 | 52.2 | 51.1 | 55.0 | 53.4 | 55.7 | 60.2 | 59.4 | 61.8 | 60.2 | 59.6 | 56.6 | 49.6 | 56.6 |
| 1892 | 51.7 | 52.4 | 54.2 | 53.1 | 58.0 | 56.8 | 58.1 | 59.4 | 60.2 | 59.6 | 56.9 | 51.1 | 56.0 |
| 1893 | 50.3 | 50.3 | 51.2 | 52.4 | 55.8 | 56.5 | 56.6 | 56.6 | 59.3 | 57.6 | 55.6 | 52.4 | 54.3 |
| 1894 | 47.7 | 48.4 | 50.6 | 55.2 | 55.4 | 55.9 | 56.4 | 59.2 | 63.4 | 59.6 | 59.4 | 49.7 | 55.1 |
| 1895 | 48.6 | 53.8 | 52.2 | 54.8 | 57.6 | 58.7 | 58.4 | 58.4 | 60.7 | 58.8 | 56.2 | 48.6 | 55.6 |
| 1896 | 52.2 | 55.3 | 54.3 | 51.6 | 56.3 | 57.2 | 59.4 | 59.5 | 59.0 | 58.8 | 53.4 | 52.8 | 55.9 |
| 1897 | 48.6 | 50.7 | 48.9 | 57.4 | 57.4 | 58.9 | 58.2 | 57.4 | 60.8 | 58.4 | 53.1 | 50.7 | 55.0 |
| 1898 | 46.7 | 52.6 | 51.2 | 54.4 | 52.6 | 59.0 | 56.2 | 57.0 | 59.0 | 61.2 | 55.4 | 49.7 | 54.0 |
| Sums | 1352.3 | 1408.8 | 1501.1 | 1540.4 | 1596.5 | 1651.6 | 1646.8 | 1650.6 | 1703.5 | 1678.1 | 1577.8 | 1444.0 | 1572.8 |
| Means | 50.1 | 52.2 | 53.6 | 55.0 | 57.0 | 59.0 | 58.8 | 59.3 | 60.0 | 59.9 | 56.4 | 51.6 | 56.2 |

SUMMARY OF MONTHLY MEAN TEMPERATURES.

| | | | | | | | | | | | | | |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Highest monthly mean | 1873 | 1886 | 1885 | 1889 | 1890 | 1888 | 1885 | 1891 | 1889 | 1887 | 1894 | 1885 | 1880 |
| Lowest monthly mean | 1890 | 1887 | 1887 | 1897 | 1898 | 1894 | 1898 | 1893 | 1893 | 1881 | 1897 | 1895 | 1893 |
| Absolute maximum | 1889 | 18 | 7 | 14 | 28 | 29 | 15 | 22 | 22 | 8 | 16 | 8 | 1 |
| | 78 | 80 | 80 | 88 | 97 | 100 | 93 | 92 | 94 | 94 | 83 | 72 | 100 |

| | 15, 1888 | 5, 1887 | 3, 1896 | 7, 1891 | 16, 1894 | 19, 1893 | 31, 1893 | 8, 1893 | 30, 1894 | 14, 1881 | 27, 1896 | 24, 1879 | 2, 1888 |
|---|----------|---------|---------|---------|----------|----------|----------|---------|----------|----------|----------|----------|---------|
| Absolute minimum..... | 29 | 33 | 33 | 40 | 44 | 47 | 47 | 47 | 49 | 45 | 38 | 34 | 29 |
| Greatest daily range..... | 24 | 27 | 28 | 34 | 39 | 43 | 36 | 38 | 35 | 31 | 25 | 20 | 43 |
| Mean daily range..... | 9.9 | 10.7 | 11.3 | 11.7 | 12.0 | 12.5 | 11.5 | 11.4 | 13.3 | 13.3 | 11.3 | 9.3 | 11.5 |
| Mean variability..... | 2.2 | 2.0 | 2.5 | 2.7 | 2.9 | 2.4 | 2.4 | 2.4 | 3.0 | 3.5 | 2.6 | 2.2 | 2.6 |
| Mean of three consecutive warmest days..... | 67.0 | 64.7 | 67.7 | 66.7 | 73.7 | 75.0 | 66.3 | 76.0 | 76.3 | 71.7 | 69.3 | 62.0 | 76.3 |
| Mean of three consecutive coldest days..... | 42.7 | 43.7 | 40.7 | 48.3 | 49.7 | 53.0 | 50.0 | 52.7 | 54.0 | 52.0 | 44.7 | 42.3 | 40.7 |

WEATHER.

| | 1, June 29. | 2, January 15. | 3, Record subsequent to January 1, 1891. | 4, Only 10 days in 27 years. |
|--|-------------|----------------|--|------------------------------|
| Average number clear days..... | 11 | 10 | 11 | 16 |
| Average number partly cloudy days..... | 10 | 10 | 12 | 11 |
| Average number cloudy days..... | 10 | 8 | 6 | 4 |
| Average number rainy days..... | 11 | 10 | 7 | 4 |

Monthly precipitation (in inches and hundredths).

| Year. | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Annual. | Season of— | Seasonal. |
|-------|-------|-------|------|-------|------|-------|--------|--------|--------|--------|-------|-------|---------|------------|-----------|
| 1849 | 8.31 | 1.77 | 4.53 | 0.46 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.14 | 8.06 | 6.20 | 17.40 | 1849-50 | 33.10 |
| 1850 | 0.72 | 0.54 | 1.94 | 1.23 | 0.67 | 0.00 | 0.00 | 0.00 | 0.33 | 0.00 | 0.92 | 1.05 | 15.56 | 1850-51 | 7.40 |
| 1851 | 0.58 | 0.14 | 0.68 | 0.26 | 0.32 | 0.00 | 0.00 | 0.00 | 1.03 | 0.21 | 2.12 | 7.10 | 15.56 | 1851-52 | 18.44 |
| 1852 | 3.32 | 1.42 | 4.86 | 5.37 | 0.35 | 0.00 | 0.00 | 0.04 | 0.46 | 0.12 | 2.28 | 13.20 | 27.29 | 1852-53 | 35.23 |
| 1853 | 3.88 | 8.04 | 3.51 | 3.12 | 0.02 | 0.08 | 0.00 | 0.15 | 0.13 | 2.41 | 0.34 | 0.81 | 22.37 | 1853-54 | 23.87 |
| 1854 | 3.67 | 4.77 | 4.64 | 3.00 | 1.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.67 | 5.76 | 26.39 | 1854-55 | 23.68 |
| 1855 | 9.40 | 8.50 | 1.60 | 2.94 | 0.76 | 0.03 | 0.02 | 0.00 | 0.07 | 0.45 | 2.79 | 3.75 | 22.31 | 1855-56 | 21.66 |
| 1856 | 2.45 | 8.59 | 1.62 | 0.00 | 0.02 | 0.12 | 0.00 | 0.05 | 0.00 | 0.03 | 3.01 | 4.14 | 20.93 | 1856-57 | 19.88 |
| 1857 | 4.36 | 1.83 | 5.55 | 1.55 | 0.34 | 0.05 | 0.05 | 0.16 | 0.00 | 2.74 | 0.69 | 0.14 | 23.46 | 1857-58 | 21.81 |
| 1858 | 1.28 | 6.32 | 3.02 | 0.27 | 1.55 | 0.00 | 0.00 | 0.02 | 0.03 | 0.05 | 7.28 | 1.57 | 21.39 | 1858-59 | 22.22 |
| 1859 | 1.64 | 1.60 | 3.99 | 3.14 | 2.86 | 0.09 | 0.21 | 0.00 | 0.00 | 0.10 | 0.58 | 6.16 | 20.46 | 1859-60 | 22.27 |
| 1860 | 2.47 | 3.72 | 4.08 | 0.51 | 1.00 | 0.08 | 0.00 | 0.00 | 0.02 | 0.00 | 4.10 | 9.54 | 25.52 | 1860-61 | 19.00 |
| 1861 | 24.36 | 7.53 | 2.20 | 0.73 | 0.74 | 0.05 | 0.00 | 0.00 | 0.00 | 0.40 | 0.15 | 2.35 | 38.51 | 1861-62 | 49.37 |
| 1862 | 3.63 | 3.19 | 2.05 | 1.04 | 0.26 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 2.55 | 14.56 | 18.62 | 1862-63 | 13.08 |
| 1863 | 1.83 | 0.00 | 1.52 | 1.57 | 0.78 | 0.00 | 0.00 | 0.21 | 0.01 | 0.13 | 0.68 | 8.91 | 21.64 | 1863-64 | 10.08 |
| 1864 | 5.14 | 1.34 | 0.74 | 0.94 | 0.63 | 0.00 | 0.00 | 0.00 | 0.24 | 0.26 | 4.19 | 0.58 | 14.00 | 1864-65 | 24.73 |
| 1865 | 10.88 | 2.12 | 3.04 | 2.12 | 1.46 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 3.35 | 15.10 | 36.28 | 1865-66 | 22.93 |
| 1866 | 5.16 | 0.13 | 1.58 | 2.36 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.20 | 3.41 | 10.09 | 30.64 | 1866-67 | 34.92 |
| 1867 | 8.50 | 0.78 | 6.30 | 2.31 | 0.08 | 0.23 | 0.00 | 0.00 | 0.00 | 0.15 | 1.18 | 4.31 | 22.50 | 1867-68 | 38.84 |
| 1868 | 3.89 | 4.78 | 2.09 | 1.53 | 0.08 | 0.02 | 0.00 | 0.00 | 0.03 | 0.00 | 0.43 | 3.38 | 16.24 | 1868-69 | 19.31 |
| 1869 | 3.07 | 3.76 | 1.05 | 1.80 | 0.23 | 0.01 | 0.00 | 0.00 | 0.00 | 0.07 | 2.81 | 14.36 | 20.44 | 1869-70 | 14.10 |
| 1870 | 4.00 | 6.90 | 3.14 | 2.19 | 0.20 | 0.00 | 0.00 | 0.02 | 0.00 | 0.11 | 2.79 | 5.95 | 22.42 | 1870-71 | 34.71 |
| 1871 | 1.59 | 1.59 | 0.81 | 0.43 | 0.00 | 0.02 | 0.01 | 0.00 | 0.04 | 0.11 | 2.79 | 5.95 | 22.42 | 1871-72 | 18.02 |
| 1872 | 3.94 | 3.94 | 0.70 | 0.43 | 0.00 | 0.02 | 0.01 | 0.08 | 0.00 | 0.00 | 1.16 | 9.72 | 18.56 | 1872-73 | 23.98 |
| 1873 | 5.66 | 2.21 | 3.36 | 0.90 | 0.66 | 0.14 | 0.00 | 0.02 | 0.00 | 0.24 | 6.55 | 0.33 | 22.52 | 1873-74 | 18.40 |
| 1874 | 8.01 | 4.32 | 1.30 | 0.10 | 0.22 | 1.02 | 0.00 | 0.00 | 0.00 | 0.00 | 7.27 | 4.15 | 22.03 | 1874-75 | 26.01 |
| 1875 | 7.55 | 4.92 | 5.40 | 1.20 | 0.24 | 0.04 | 0.01 | 0.01 | 0.38 | 3.36 | 0.25 | 0.00 | 23.54 | 1875-76 | 35.18 |
| 1876 | 4.32 | 1.18 | 1.08 | 0.26 | 0.16 | 0.01 | 0.02 | 0.00 | 0.00 | 0.65 | 1.57 | 2.60 | 11.93 | 1876-77 | 11.04 |
| 1877 | 11.97 | 12.52 | 4.56 | 1.06 | 0.16 | 0.01 | 0.01 | Trace. | 0.55 | 1.27 | 0.57 | 0.58 | 33.20 | 1877-78 | 35.18 |
| 1878 | 3.52 | 4.90 | 8.75 | 1.89 | 2.35 | 0.05 | 0.01 | 0.02 | Trace. | 0.78 | 4.03 | 4.46 | 30.76 | 1878-79 | 24.44 |
| 1879 | 2.23 | 1.87 | 2.08 | 10.06 | 1.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.33 | 12.33 | 30.70 | 1879-80 | 26.66 |
| 1880 | 8.69 | 4.65 | 0.00 | 2.00 | 0.22 | 0.69 | 0.00 | 0.00 | 0.25 | 0.54 | 1.94 | 3.85 | 23.73 | 1880-81 | 29.86 |
| 1881 | 1.68 | 2.96 | 3.45 | 1.22 | 0.21 | 0.04 | 0.00 | 0.00 | 0.00 | 2.66 | 4.18 | 2.01 | 18.67 | 1881-82 | 16.14 |
| 1882 | 1.92 | 1.04 | 3.01 | 1.51 | 3.52 | 0.01 | 0.00 | 0.00 | 0.42 | 1.48 | 1.60 | 0.92 | 15.43 | 1882-83 | 20.12 |
| 1883 | 3.04 | 6.63 | 8.24 | 6.33 | 0.23 | 2.57 | Trace. | 0.04 | 0.33 | 2.55 | 0.26 | 7.08 | 38.82 | 1883-84 | 32.38 |
| 1884 | 2.53 | 0.30 | 1.01 | 3.17 | 0.04 | 0.19 | 0.06 | Trace. | 0.11 | 0.72 | 11.78 | 4.09 | 18.84 | 1884-85 | 18.10 |
| 1885 | 7.42 | 0.24 | 2.07 | 5.28 | 0.37 | 0.01 | 0.23 | Trace. | 0.01 | 1.48 | 0.84 | 2.07 | 20.02 | 1885-86 | 33.05 |
| 1886 | 1.90 | 9.24 | 0.84 | 2.30 | 0.06 | 0.07 | 0.01 | 0.20 | Trace. | Trace. | 0.99 | 3.34 | 19.04 | 1886-87 | 10.04 |
| 1887 | 6.81 | 0.94 | 3.60 | 0.11 | 0.38 | 0.27 | 0.01 | 0.08 | 0.13 | 0.13 | 3.09 | 5.80 | 23.03 | 1887-88 | 16.71 |
| 1888 | 1.28 | 0.72 | 7.78 | 0.96 | 2.17 | 0.03 | 0.01 | Trace. | Trace. | 7.28 | 2.90 | 13.81 | 36.94 | 1888-89 | 23.80 |
| 1889 | 0.61 | 5.16 | 4.73 | 1.18 | 1.07 | 0.10 | 0.02 | 0.00 | 0.31 | 0.00 | 0.00 | 3.25 | 25.43 | 1889-90 | 45.85 |
| 1890 | 0.88 | 7.26 | 1.00 | 2.44 | 1.25 | 0.11 | 0.10 | 0.02 | 0.77 | 0.04 | 0.50 | 5.02 | 21.11 | 1890-91 | 17.58 |

| | | | | | | | | | | | | | | | |
|------------|--------|--------|--------|-------|-------|--------|--------|--------|-------|-------|--------|--------|---------|---------|-------|
| 1892 | 2.42 | 2.90 | 2.85 | 1.39 | 1.86 | Trace. | 0.00 | 0.00 | 0.02 | 1.65 | 3.91 | 5.08 | 22.08 | 1891-92 | 18.53 |
| 1893 | 3.05 | 2.75 | 4.08 | 1.63 | 0.15 | 0.01 | 0.02 | 0.00 | 0.21 | 0.16 | 4.18 | 2.25 | 17.01 | 1892-93 | 22.05 |
| 1894 | 5.09 | 2.69 | 0.60 | 0.50 | 1.31 | 0.56 | Trace. | 0.00 | 1.05 | 1.73 | 0.88 | 9.01 | 24.32 | 1893-94 | 18.47 |
| 1895 | 6.99 | 2.31 | 1.89 | 1.24 | 0.60 | 0.00 | 0.01 | 0.00 | 0.77 | 0.11 | 1.78 | 1.43 | 17.13 | 1894-95 | 27.29 |
| 1896 | 8.14 | 0.28 | 2.85 | 5.16 | 0.72 | 0.00 | 0.04 | 0.09 | 0.52 | 1.55 | 4.56 | 4.34 | 28.25 | 1895-96 | 21.25 |
| 1897 | 2.26 | 4.41 | 4.56 | 0.27 | 0.61 | 0.22 | Trace. | Trace. | 0.10 | 1.70 | 1.05 | 1.22 | 16.49 | 1896-97 | 23.43 |
| 1898 | 1.12 | 2.13 | 0.24 | 0.19 | 1.44 | 0.19 | 0.00 | Trace. | 1.06 | 0.86 | 0.46 | 1.62 | 9.31 | 1897-98 | 0.38 |
| 1899 | 3.67 | 0.10 | 7.61 | 0.62 | 0.86 | 0.01 | 0.00 | Trace. | 0.00 | 3.92 | 3.79 | 2.65 | 23.23 | 1898-99 | 16.87 |
| Sums..... | 245.70 | 174.68 | 160.92 | 92.23 | 36.36 | 7.23 | 0.89 | 0.79 | 11.12 | 52.08 | 138.86 | 254.74 | 1150.79 | | |
| Means..... | 4.92 | 3.49 | 3.22 | 1.84 | 0.73 | 0.14 | 0.02 | 0.02 | 0.22 | 1.02 | 2.72 | 4.99 | 23.02 | | |

Beginning of Weather Bureau record.

Greatest precipitation in twenty-four hours for each month.

| Year. | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Greatest annual. |
|----------|------------------|-------------------|-------------------|---------------------|-------------------|---------------------|------------------|---------------------|---------------------|---------------------|------------------|---------------------|------------------|
| 1871 | 2.36 | 1.28 | 0.57 | 1.28 | 0.13 | 0.01 | 0.00 | 0.02 | 0.00 | 0.07 | 1.24 | 3.14 | 3.14 |
| 1872 | 1.02 | 0.82 | 0.73 | 0.35 | 0.15 | 0.03 | 0.01 | 0.00 | 0.04 | 0.11 | 2.06 | 2.33 | 2.36 |
| 1873 | 1.61 | 0.81 | 0.54 | 0.30 | 0.00 | 0.01 | 0.01 | 0.05 | 0.00 | 0.77 | 0.80 | 2.33 | 2.33 |
| 1874 | 2.10 | 0.27 | 0.05 | 0.70 | 0.22 | 0.13 | 0.00 | 0.00 | 0.02 | 1.58 | 3.98 | 0.15 | 3.98 |
| 1875 | 1.76 | 1.80 | 1.59 | 0.60 | 0.14 | 0.90 | 0.00 | 0.00 | 0.00 | 0.22 | 2.37 | 1.50 | 2.37 |
| 1876 | 1.63 | 0.52 | 0.50 | 0.60 | 0.24 | 0.04 | 0.01 | 0.01 | 0.20 | 1.39 | 0.19 | 0.00 | 1.80 |
| 1877 | 1.08 | 1.92 | 1.01 | 0.08 | 0.18 | 0.01 | 0.02 | 0.00 | 0.00 | 0.36 | 0.56 | 1.11 | 1.63 |
| 1878 | 1.04 | 1.01 | 0.61 | 0.61 | 0.14 | 0.01 | 0.01 | Trace. | 0.45 | 1.27 | 0.45 | 0.33 | 1.98 |
| 1879 | 1.03 | 0.64 | 0.31 | 0.72 | 0.93 | 0.05 | 0.01 | 0.02 | Trace. | 0.50 | 1.38 | 1.55 | 3.31 |
| 1880 | 4.07 | 1.37 | 0.69 | 2.21 | 0.84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.32 | 2.36 | 2.36 |
| 1881 | 0.57 | 0.82 | 0.60 | 1.09 | 0.17 | 0.41 | 0.00 | 0.00 | 0.25 | 0.21 | 1.34 | 1.35 | 4.67 |
| 1882 | 1.30 | 0.71 | 0.63 | 0.44 | 1.15 | 0.02 | 0.00 | 0.00 | 0.26 | 1.40 | 2.41 | 0.76 | 2.41 |
| 1883 | 1.44 | 1.52 | 2.21 | 0.76 | 1.23 | 0.01 | 0.00 | 0.00 | 0.42 | 1.19 | 1.01 | 0.28 | 1.63 |
| 1884 | 0.97 | 0.15 | 0.55 | 1.66 | 0.12 | 1.23 | 0.00 | 0.03 | 0.21 | 1.15 | 0.19 | 2.07 | 2.21 |
| 1885 | 2.40 | 0.18 | 0.65 | 2.03 | 0.04 | 0.01 | 0.05 | Trace. | 0.11 | 0.70 | 2.58 | 2.78 | 2.78 |
| 1886 | 0.80 | 3.60 | 0.52 | 1.36 | 0.21 | 0.01 | 0.23 | 0.00 | 0.01 | 0.72 | 0.77 | 1.10 | 2.40 |
| 1887 | 1.58 | 0.38 | 0.52 | 1.45 | 0.03 | 0.07 | Trace. | 0.01 | 0.18 | 0.00 | 0.48 | 1.14 | 3.60 |
| 1888 | 0.81 | 0.59 | 1.34 | 0.11 | 0.10 | 0.10 | 0.01 | 0.01 | 0.92 | 0.05 | 1.68 | 1.51 | 1.68 |
| 1889 | 2.08 | 1.63 | 3.08 | 0.30 | 1.29 | 0.03 | 0.01 | Trace. | Trace. | 2.03 | 0.02 | 1.46 | 3.08 |
| 1890 | 0.75 | 3.38 | 1.86 | 0.55 | 0.53 | 0.05 | 0.02 | 0.00 | 0.31 | 0.00 | 0.00 | 1.00 | 2.08 |
| 1891 | 1.06 | 1.03 | 0.68 | 1.20 | 0.61 | 0.10 | 0.09 | 0.02 | 0.63 | 0.03 | 0.26 | 2.21 | 3.38 |
| 1892 | 1.30 | 1.06 | 0.08 | 0.38 | 1.15 | Trace. | 0.00 | 0.00 | 0.02 | 0.91 | 1.46 | 2.34 | 2.34 |
| 1893 | 2.01 | 1.05 | 0.34 | 0.71 | 0.14 | 0.03 | 0.02 | 0.00 | 0.12 | 0.10 | 0.69 | 0.07 | 1.60 |
| 1894 | 1.80 | 1.44 | 0.67 | 0.89 | 0.68 | 0.22 | Trace. | 0.00 | 1.04 | 0.64 | 0.83 | 1.04 | 2.01 |
| 1895 | 1.85 | 0.18 | 0.84 | 2.43 | 0.27 | 0.00 | 0.01 | 0.00 | 0.62 | 0.06 | 1.06 | 0.51 | 1.96 |
| 1896 | 1.08 | 1.23 | 1.42 | 0.20 | 6.34 | 0.00 | 0.04 | 0.06 | 0.41 | 1.40 | 2.70 | 1.65 | 2.70 |
| 1897 | 0.33 | 0.78 | 1.43 | 0.19 | 0.61 | 0.19 | Trace. | Trace. | 0.08 | 1.41 | 0.42 | 1.02 | 1.42 |
| 1898 | 0.98 | 0.08 | 2.15 | 0.45 | 1.23 | 0.18 | 0.00 | Trace. | 0.73 | 0.45 | 0.36 | 0.70 | 1.23 |
| 1899 | | | | | 0.77 | 0.01 | 0.00 | Trace. | 0.00 | 1.04 | 1.51 | 1.17 | 2.15 |
| Greatest | 4.67 29, 1881 | 3.60 4-5, 1887 | 3.31 4-5, 1879 | 2.43 23-24, 1896 | 1.29 4-5, 1889 | 1.23 11-12, 1884 | 0.23 10, 1886 | 0.06 29-30, 1896 | 1.04 29-30, 1894 | 2.03 17-18, 1889 | 3.08 23, 1874 | 3.14 18-19, 1871 | ----- ----- |

Dates when precipitation equaled or exceeded 2.50 inches in any consecutive twenty-four hours at San Francisco, Cal.

| | Inches. |
|---|---------|
| December 17 and 18, 1871, from 11.43 p. m. 17th to 11.43 p. m. 18th | 2.83 |
| December 18 and 19, 1871, from 11.43 p. m. 18th to 11.43 p. m. 19th | 3.12 |
| November 22 and 23, 1874, from 11.08 p. m. 22d to 11.08 p. m. 23d | 3.98 |
| March 4 and 5, 1879, from 4.43 p. m. 4th to 4.43 p. m. 5th | 3.31 |
| January 28 and 29, 1881, from 11.08 p. m. 28th to 11.08 p. m. 29th | 4.67 |
| November 23 and 24, 1885, from 11 p. m. 23d to 11 p. m. 24th | 2.58 |
| December 21, 1885, from 1.35 a. m. 21st to 1.35 p. m. 21st | 2.78 |
| February 4 and 5, 1887, from 3 p. m. 4th to 3 p. m. 5th | 3.60 |
| March 12 and 13, 1889, from 8.15 a. m. 12th to 8 a. m. 13th | 3.08 |
| February 14 and 15, 1891, from 8.45 p. m. 14th to 8 p. m. 15th | 3.38 |
| January 19 and 20, 1894, from 8 p. m. 19th to 8 p. m. 20th | 2.61 |
| November 23 and 24, 1896, 6 a. m. 23d to 6 a. m. 24th | 2.79 |

Maximum rate of rainfall (record since 1893): Five minutes, 0.15; 10 minutes, 0.17; 1 hour, 0.55.

Greatest monthly precipitation and date.

| Month. | Year. | Amount. | Month. | Year. | Amount. |
|----------------|-------|---------|-----------------|-------|---------|
| January | 1862 | 24.36 | July | 1886 | 0.23 |
| February | 1878 | 12.52 | August | 1864 | 0.21 |
| March | 1879 | 8.75 | September | 1898 | 1.06 |
| April | 1880 | 10.06 | October | 1889 | 7.28 |
| May | 1883 | 3.52 | November | 1885 | 11.78 |
| June | 1884 | 2.57 | December | 1866 | 15.16 |

Least monthly precipitation and date.

| Month. | Year. | Amount. | Month. | Year. | Amount. |
|----------------|------------------|---------|-----------------|------------------|---------|
| January | 1852 | 0.58 | July | (¹) | 0 |
| February | 1864 | 0 | August | (¹) | 0 |
| March | 1898 | 0.24 | September | (¹) | 0 |
| April | 1857 | 0 | October | (¹) | 0 |
| May | (¹) | 0 | November | 1890 | 0 |
| June | (¹) | 0 | December | 1876 | 0 |

¹ Many years.

Number of times monthly precipitation has exceeded the normal for fifty years.

| Month. | Total. | First 25 years. | Second 25 years. | Month. | Total. | First 25 years. | Second 25 years. |
|----------------|--------|-----------------|------------------|-----------------|--------|-----------------|------------------|
| January | 19 | 9 | 10 | July | 6 | 2 | 4 |
| February | 22 | 13 | 9 | August | 7 | 5 | 2 |
| March | 20 | 10 | 10 | September | 18 | 4 | 14 |
| April | 18 | 9 | 9 | October | 16 | 5 | 11 |
| May | 18 | 8 | 10 | November | 23 | 15 | 8 |
| June | 9 | 1 | 8 | December | 20 | 13 | 7 |

Total number of days on which precipitation has fallen since March 1, 1871.

| Month. | Less than 0.01. | 0.01-0.10. | 0.11-0.25. | 0.26-0.50. | 0.51-1.00. | Over 1.00. |
|-----------------|-----------------|------------|------------|------------|------------|------------|
| January | 35 | 109 | 61 | 56 | 54 | 34 |
| February | 21 | 114 | 56 | 51 | 45 | 18 |
| March | 45 | 129 | 63 | 50 | 45 | 17 |
| April | 44 | 96 | 40 | 32 | 16 | 16 |
| May | 49 | 73 | 23 | 10 | 12 | 3 |
| June | 28 | 43 | 6 | 5 | 3 | 0 |
| July | 13 | 16 | 1 | 0 | 0 | 0 |
| August | 18 | 13 | 0 | 0 | 0 | 0 |
| September | 24 | 31 | 11 | 6 | 5 | 0 |
| October | 24 | 54 | 17 | 15 | 17 | 10 |
| November | 26 | 72 | 39 | 32 | 19 | 23 |
| December | 27 | 89 | 55 | 72 | 46 | 38 |

Foggy days and thunderstorms.

| Month. | Total number of foggy days. | Number of thunderstorms. | Month. | Total number of foggy days. | Number of thunderstorms. |
|----------------|-----------------------------|--------------------------|-----------------|-----------------------------|--------------------------|
| January | 13 | 2 | July | 18 | 1 |
| February | 10 | 0 | August | 26 | 1 |
| March | 10 | 1 | September | 20 | 2 |
| April | 6 | 2 | October | 27 | 1 |
| May | 1 | 1 | November | 22 | 0 |
| June | 7 | 1 | December | 15 | 4 |

Record began January 1, 1891.

Number of high winds.

| Month. | Velocity. | | | Month. | Velocity. | | |
|----------------|-----------|-----------|----------|-----------------|-----------|-----------|----------|
| | 30 to 35. | 36 to 40. | Over 40. | | 30 to 35. | 36 to 40. | Over 40. |
| January | 18 | 16 | 7 | July | 155 | 42 | 1 |
| February | 20 | 7 | 1 | August | 133 | 26 | 2 |
| March | 37 | 11 | 2 | September | 86 | 4 | 0 |
| April | 67 | 12 | 2 | October | 34 | 3 | 0 |
| May | 92 | 11 | 2 | November | 10 | 1 | 5 |
| June | 166 | 28 | 3 | December | 23 | 0 | 3 |

Record commencing September 1, 1881.

Highest wind velocity, direction, and date for each month.

| Month. | Velocity. | Direction. | Date. | Month. | Velocity. | Direction. | Date. |
|----------------|-----------|------------|----------|-----------------|-----------|------------|----------|
| January | 48 | SW. | 26, 1875 | July | 41 | W. | 15, 1898 |
| February | 48 | SW. | 22, 1891 | August | 42 | SW. | 2, 1893 |
| March | 44 | N. | 8, 1880 | September | 38 | SW. | 11, 1894 |
| April | 47 | N.W. | 23, 1871 | October | 38 | N. | 29, 1877 |
| May | 45 | W. | 11, 1897 | November | 56 | SE. | 30, 1892 |
| June | 48 | SW. | 30, 1873 | December | 60 | SE. | 23, 1892 |

¹Cups blow off before maximum was reached.

Average velocity of afternoon winds.

| Month. | 2 to 3. | 3 to 4. | 4 to 5. | Month. | 2 to 3. | 3 to 4. | 4 to 5. |
|----------------|---------|---------|---------|-----------------|---------|---------|---------|
| January | 8.8 | 8.6 | 8.0 | July | 21.0 | 21.6 | 22.0 |
| February | 10.5 | 10.8 | 10.8 | August | 20.2 | 20.9 | 20.8 |
| March | 13.4 | 14.1 | 14.1 | September | 17.7 | 18.5 | 18.4 |
| April | 16.7 | 17.3 | 16.9 | October | 13.4 | 14.0 | 14.1 |
| May | 18.0 | 18.5 | 18.1 | November | 9.2 | 9.4 | 9.6 |
| June | 20.8 | 21.3 | 21.0 | December | 8.4 | 8.1 | 7.7 |

Average hourly velocity.

| | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. |
|-------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|
| 1 a.m. | 0.1 | 0.1 | 6.7 | 7.3 | 7.9 | 9.3 | 9.2 | 8.9 | 6.8 | 5.3 | 5.2 | 6.1 |
| 2 a.m. | 6.2 | 5.9 | 6.3 | 7.0 | 7.6 | 8.8 | 8.8 | 8.5 | 6.4 | 5.0 | 5.1 | 6.2 |
| 3 a.m. | 6.3 | 5.8 | 6.3 | 6.6 | 7.2 | 8.2 | 8.2 | 7.9 | 6.0 | 4.9 | 5.2 | 6.2 |
| 4 a.m. | 6.3 | 5.9 | 6.2 | 0.3 | 6.8 | 7.6 | 7.8 | 7.0 | 5.9 | 4.8 | 5.1 | 6.3 |
| 5 a.m. | 6.4 | 6.1 | 6.3 | 6.1 | 6.6 | 7.1 | 7.4 | 7.3 | 5.6 | 4.8 | 5.2 | 6.4 |
| 6 a.m. | 6.5 | 5.9 | 6.1 | 6.0 | 6.4 | 0.9 | 7.4 | 6.9 | 5.4 | 4.7 | 5.3 | 6.5 |
| 7 a.m. | 6.4 | 5.8 | 6.1 | 6.2 | 6.7 | 7.1 | 7.4 | 6.8 | 5.4 | 4.7 | 5.1 | 6.6 |
| 8 a.m. | 6.5 | 6.2 | 6.6 | 7.0 | 7.5 | 8.1 | 8.0 | 7.4 | 5.8 | 5.0 | 5.5 | 6.8 |
| 9 a.m. | 7.0 | 6.9 | 7.3 | 7.8 | 8.3 | 8.8 | 8.6 | 7.8 | 6.4 | 5.6 | 6.1 | 7.1 |
| 10 a.m. | 7.6 | 7.6 | 8.0 | 8.6 | 9.3 | 10.3 | 9.9 | 8.9 | 7.0 | 6.2 | 6.6 | 7.7 |
| 11 a.m. | 7.9 | 7.6 | 8.4 | 9.7 | 11.0 | 12.4 | 11.8 | 11.1 | 8.3 | 6.7 | 6.7 | 7.8 |
| 12 noon | 8.2 | 7.8 | 9.2 | 11.6 | 13.3 | 15.2 | 14.7 | 13.3 | 10.7 | 8.1 | 6.8 | 7.9 |
| 1 p.m. | 8.4 | 8.0 | 10.6 | 13.9 | 15.4 | 17.8 | 17.4 | 16.0 | 13.3 | 9.9 | 7.4 | 8.2 |
| 2 p.m. | 8.7 | 9.0 | 12.2 | 15.6 | 17.0 | 19.8 | 19.7 | 18.5 | 15.7 | 11.8 | 8.0 | 8.5 |
| 3 p.m. | 8.8 | 10.5 | 13.4 | 16.7 | 18.0 | 20.8 | 21.0 | 20.2 | 17.7 | 13.4 | 9.2 | 8.4 |
| 4 p.m. | 8.6 | 10.8 | 14.1 | 17.3 | 18.5 | 21.3 | 21.6 | 20.9 | 18.5 | 14.0 | 9.4 | 8.1 |
| 5 p.m. | 8.0 | 10.8 | 14.1 | 16.9 | 18.1 | 21.0 | 22.0 | 20.8 | 18.4 | 14.1 | 9.6 | 7.7 |
| 6 p.m. | 7.6 | 9.8 | 13.1 | 15.9 | 17.1 | 20.1 | 20.7 | 19.9 | 17.0 | 13.2 | 8.8 | 7.6 |
| 7 p.m. | 7.3 | 9.0 | 11.6 | 14.3 | 15.2 | 18.2 | 18.7 | 17.5 | 14.8 | 11.0 | 7.7 | 7.0 |
| 8 p.m. | 6.8 | 8.3 | 9.9 | 12.3 | 13.1 | 16.1 | 16.2 | 15.2 | 12.0 | 9.0 | 6.7 | 6.7 |
| 9 p.m. | 6.5 | 7.4 | 8.6 | 10.6 | 11.3 | 13.5 | 14.0 | 13.3 | 10.0 | 7.7 | 6.1 | 6.6 |
| 10 p.m. | 6.1 | 7.0 | 7.8 | 9.5 | 10.0 | 11.8 | 12.3 | 11.3 | 9.0 | 6.6 | 5.6 | 6.4 |
| 11 p.m. | 5.9 | 6.4 | 7.2 | 8.6 | 9.0 | 10.8 | 10.8 | 10.2 | 8.2 | 6.0 | 5.2 | 6.2 |
| 12 midnight | 6.0 | 6.1 | 6.8 | 7.8 | 8.3 | 10.1 | 10.0 | 9.4 | 7.4 | 5.6 | 5.1 | 6.0 |
| Average | 7.0 | 7.6 | 8.8 | 10.4 | 11.3 | 13.0 | 13.1 | 12.3 | 10.1 | 7.8 | 6.6 | 7.0 |

Monthly relative humidity.

| Month. | A. M. | P. M. | Average. | Month. | A. M. | P. M. | Average. |
|----------|----------------|----------------|----------------|-----------|----------------|----------------|----------------|
| | <i>Per ct.</i> | <i>Per ct.</i> | <i>Per ct.</i> | | <i>Per ct.</i> | <i>Per ct.</i> | <i>Per ct.</i> |
| January | 83 | 75 | 79 | July | 89 | 80 | 84 |
| February | 83 | 73 | 78 | August | 90 | 82 | 86 |
| March | 82 | 73 | 78 | September | 88 | 78 | 83 |
| April | 83 | 74 | 78 | October | 85 | 74 | 80 |
| May | 84 | 74 | 79 | November | 82 | 71 | 76 |
| June | 86 | 75 | 80 | December | 84 | 76 | 80 |

Dates of snowfall in San Francisco since March 1, 1871.

January 21, 1876.—Light snow fell for 10 minutes.

December 31, 1882.—Heavy snow fell from 11.30 a. m. to 4.20 p. m.; amount, 3.5 inches.

February 6, 1883.—A few flakes of snow fell during the day.

February 7, 1884.—Snow fell at intervals during the day, depth varying from 1 to 2 inches.

February 5, 1887.—Snow fell during the day; depth at office 3.7 inches, while in the western portion of the city it was fully 7 inches deep.

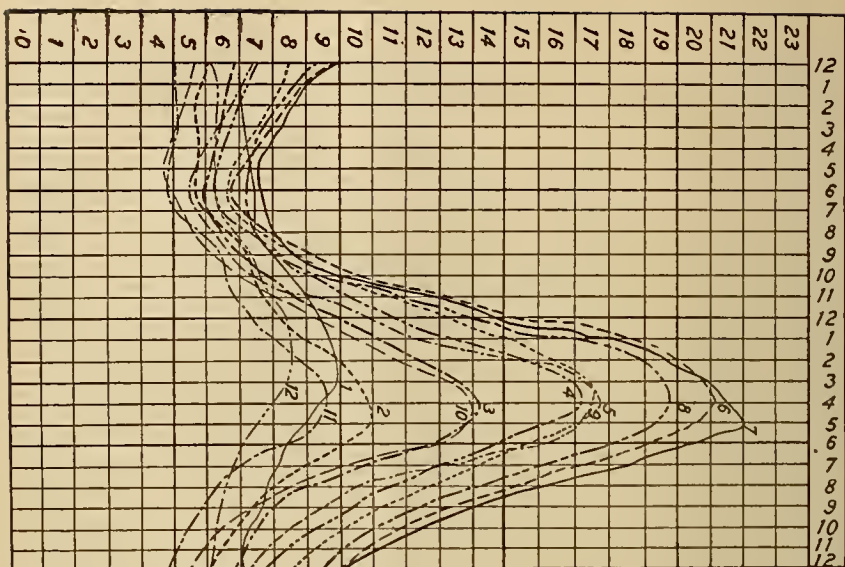
January 4, 1888.—A few flakes of snow fell during the day.

January 16, 1888.—Light snow fell to the depth of 0.1 inch.

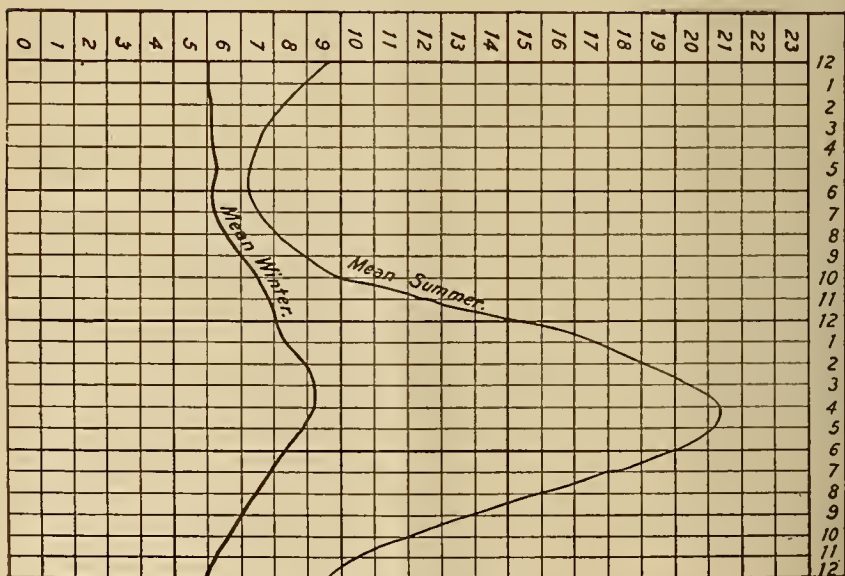
March 2, 1894.—A few flakes of snow fell during the day.

March 2, 1896.—Snow mixed with rain fell at intervals during the day.

March 3, 1896.—Heavy snow fell during the night; depth at office at 8 a. m., 1 inch.

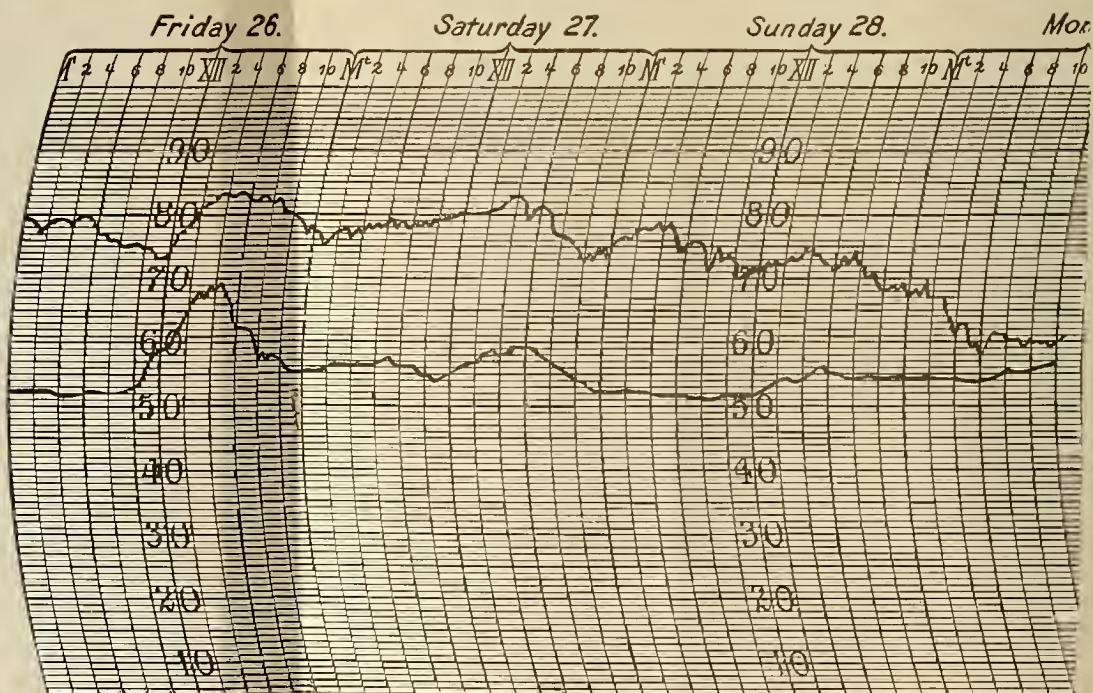
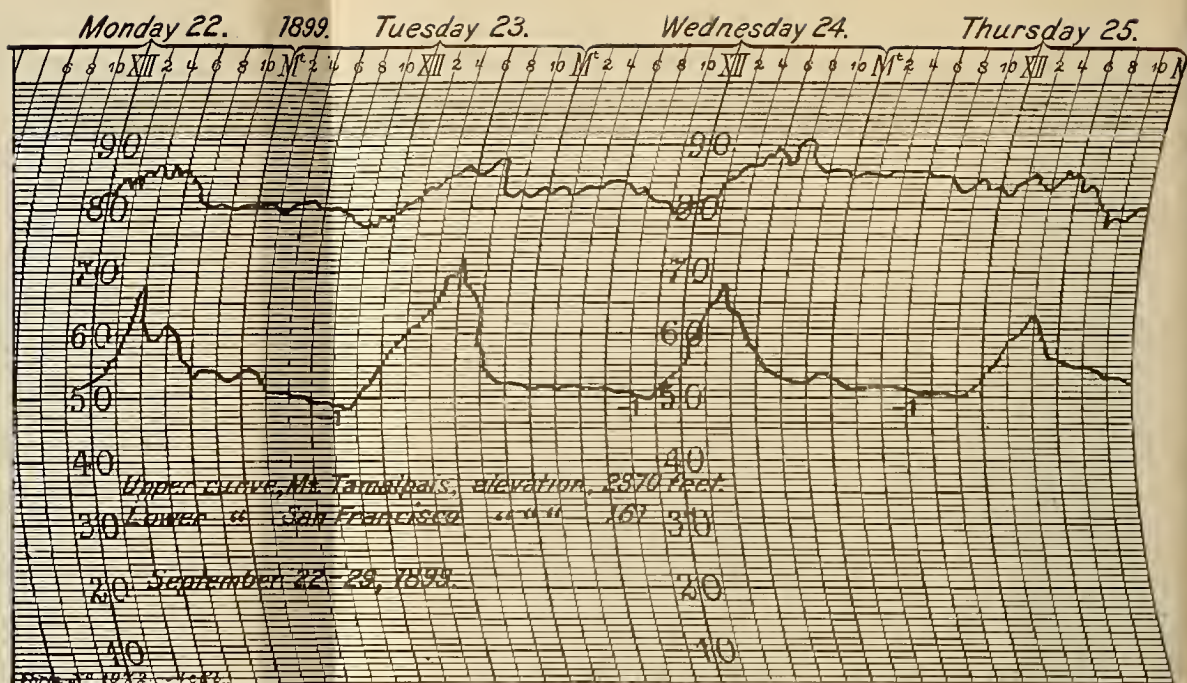


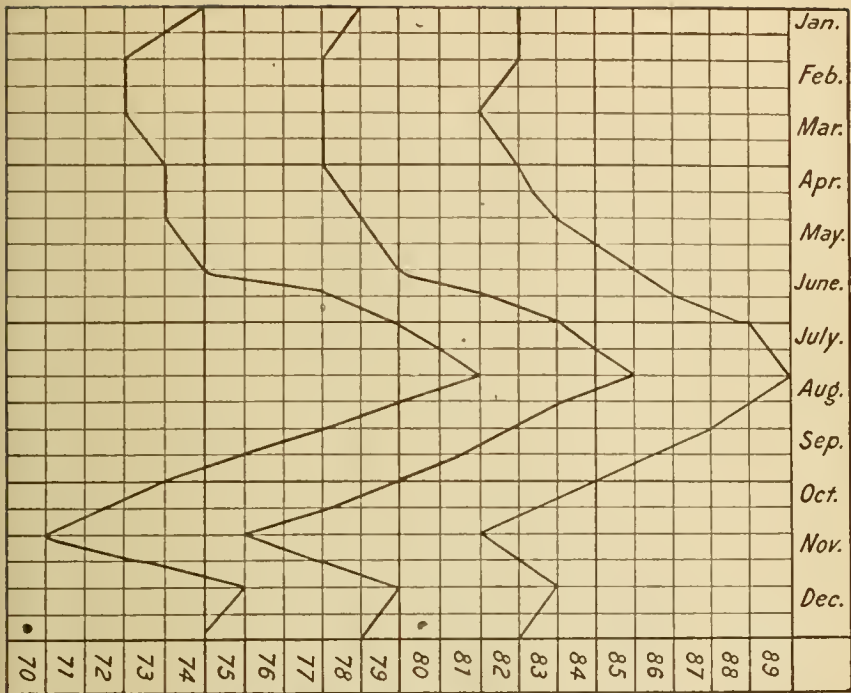
Monthly curves of hourly wind velocities.



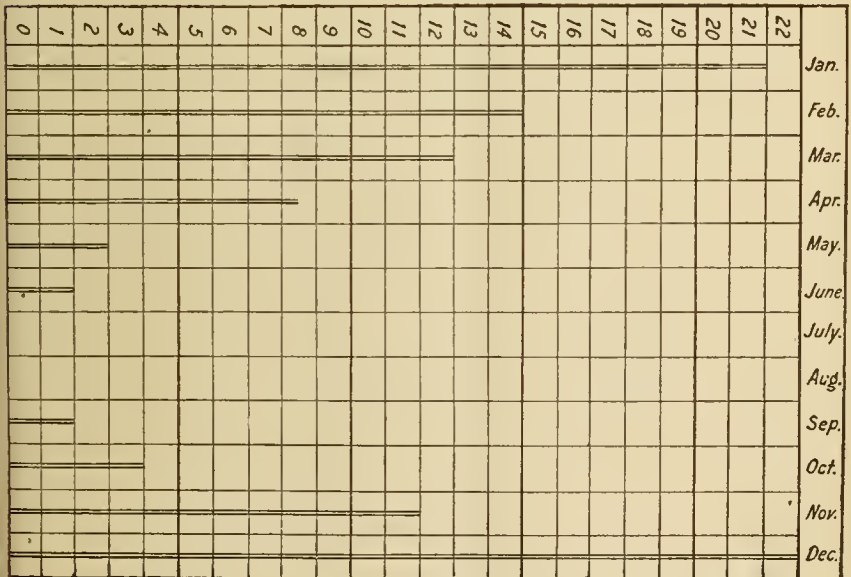
Hourly wind velocities at San Francisco.







Mean relative humidity—upper, 5 a. m.; lower, 5 p. m.



Percentage annual rainfall each month.—From Bulletin D, by A. J. Henry.

Rainfall record of Thomas Tennent, made at the foot of Market street, San Francisco, beginning October 1, 1849.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|---------------|-----------|--------------|-----------|--------------|-----------|---------------|-----------|
| 1849. | Inches. | 1851. | Inches. | 1852. | Inches. | 1853. | Inches. |
| Oct. 9..... | 1.20 | Feb. 5..... | 0.02 | Mar. 27..... | 0.25 | May 27..... | 0.01 |
| 10..... | .25 | 6..... | .11 | 31..... | .30 | Aug. 30..... | .04 |
| 30..... | 1.69 | 18..... | .04 | Apr. 22..... | .17 | Sept. 15..... | .11 |
| Nov. 2..... | 1.84 | 20..... | .12 | 25..... | .02 | 17..... | .10 |
| 4..... | .25 | 21..... | .12 | 27..... | .07 | 24..... | .02 |
| 5..... | 1.18 | 24..... | .13 | May 17..... | .32 | 26..... | .23 |
| 6..... | 1.45 | Mar. 18..... | .23 | Oct. 28..... | .80 | Oct. 10..... | .10 |
| 8..... | 1.94 | 19..... | .40 | Nov. 9..... | .02 | 17..... | .02 |
| 10..... | .71 | 20..... | .08 | 11..... | .40 | Nov. 9..... | .11 |
| 13..... | .45 | 21..... | .02 | 13..... | .30 | 10..... | .02 |
| 16..... | .84 | 22..... | .03 | 14..... | .80 | 11..... | .02 |
| Dec. 3..... | .45 | 24..... | .03 | 15..... | .25 | 12..... | .15 |
| 11..... | 1.30 | 25..... | .22 | 17..... | .20 | 13..... | .08 |
| 12..... | .84 | 27..... | .28 | 18..... | .62 | 14..... | .25 |
| 13..... | .15 | 28..... | .22 | 21..... | 1.10 | 15..... | .37 |
| 16..... | .34 | 29..... | .21 | 23..... | .12 | 17..... | .14 |
| 17..... | .05 | 30..... | .12 | 28..... | .30 | 18..... | .02 |
| 18..... | .22 | Apr. 2..... | .28 | 29..... | 1.16 | 25..... | .68 |
| 19..... | 1.21 | 3..... | .18 | 30..... | .04 | 26..... | .40 |
| 20..... | .37 | 4..... | .06 | Dec. 1..... | .82 | 27..... | .04 |
| 21..... | .54 | 8..... | .42 | 2..... | .06 | Dec. 4..... | .05 |
| 26..... | .41 | 9..... | .06 | 3..... | .19 | 5..... | .01 |
| 31..... | .32 | 16..... | .13 | 4..... | .21 | 9..... | .20 |
| | | 17..... | .06 | 5..... | .20 | 10..... | 1.35 |
| 1850. | | 19..... | .04 | 14..... | .52 | 12..... | .11 |
| Jan. 1..... | .25 | May 18..... | .58 | 15..... | .03 | 13..... | .02 |
| 2..... | 1.10 | 19..... | .06 | 16..... | .20 | 19..... | .10 |
| 4..... | .15 | 20..... | .03 | 17..... | 3.00 | 20..... | .33 |
| 6..... | .05 | June 6..... | .02 | 18..... | 1.40 | 22..... | .01 |
| 8..... | 1.45 | Aug. 17..... | .02 | 19..... | .05 | 23..... | .02 |
| 13..... | .25 | Sept. 7..... | 1.03 | 21..... | .21 | 28..... | .12 |
| 14..... | .60 | Oct. 2..... | .18 | 22..... | .07 | | |
| 17..... | .25 | 7..... | .03 | 23..... | .76 | 1854. | |
| 20..... | .15 | Nov. 8..... | 1.47 | 24..... | .11 | Jan. 12..... | .59 |
| 22..... | .05 | 16..... | .37 | 25..... | 2.54 | 13..... | 1.22 |
| 23..... | .58 | 18..... | .03 | 28..... | .31 | 14..... | .27 |
| 24..... | .48 | 20..... | .24 | 29..... | 1.72 | 15..... | .29 |
| 25..... | .25 | 29..... | .10 | 30..... | .75 | 16..... | .32 |
| 26..... | .53 | Dec. 2..... | .03 | 31..... | .05 | 18..... | .15 |
| 29..... | 2.20 | 3..... | .85 | | | 22..... | .01 |
| Feb. 4..... | .45 | 4..... | .12 | 1853. | | 23..... | .42 |
| 6..... | .15 | 5..... | .23 | Jan. 3..... | .02 | 24..... | .55 |
| 22..... | .18 | 19..... | .28 | 4..... | .04 | 25..... | .00 |
| 26..... | .99 | 20..... | .14 | 5..... | .69 | Feb. 4..... | .22 |
| Mar. 1..... | .12 | 21..... | .06 | 6..... | .01 | 5..... | .51 |
| 6..... | .84 | 22..... | 2.00 | 7..... | 2.06 | 6..... | .16 |
| 7..... | 1.05 | 23..... | .55 | 8..... | .13 | 9..... | .70 |
| 8..... | .71 | 24..... | .60 | 10..... | .20 | 10..... | .52 |
| 15..... | .76 | 25..... | .20 | 11..... | .33 | 11..... | .12 |
| 18..... | .58 | 26..... | .30 | 14..... | .18 | 12..... | 1.06 |
| 22..... | .47 | 27..... | .26 | 27..... | .25 | 19..... | .01 |
| Apr. 19..... | .32 | 28..... | .24 | 28..... | .01 | 20..... | .05 |
| 25..... | .12 | 29..... | .30 | Feb. 22..... | .29 | 21..... | .91 |
| 26..... | .02 | 30..... | .82 | 23..... | .15 | 22..... | 1.10 |
| Sept. 12..... | .10 | 31..... | .12 | 24..... | .37 | 23..... | .25 |
| 15..... | .15 | | | 25..... | .34 | 25..... | .56 |
| 21..... | .07 | 1852. | | 26..... | .27 | 26..... | .48 |
| 23..... | .01 | Jan. 2..... | .07 | Mar. 8..... | .14 | 27..... | 1.26 |
| Nov. 19..... | .47 | 4..... | .03 | 14..... | .76 | 28..... | .13 |
| 21..... | .10 | 28..... | .16 | 15..... | .02 | Mar. 2..... | .02 |
| 22..... | .04 | 30..... | .32 | 27..... | 2.85 | 3..... | .20 |
| 23..... | .11 | Feb. 6..... | .05 | 28..... | .62 | 4..... | .07 |
| 24..... | .02 | 17..... | .02 | 29..... | .47 | 12..... | .07 |
| 28..... | .13 | 28..... | .03 | Apr. 11..... | .81 | 13..... | 2.25 |
| 29..... | .05 | 29..... | .04 | 13..... | .36 | 14..... | .50 |
| Dec. 1..... | .08 | Mar. 1..... | .30 | 16..... | 3.45 | 15..... | .20 |
| 11..... | .26 | 2..... | .15 | 17..... | .14 | 17..... | .03 |
| 13..... | .35 | 3..... | .60 | 19..... | .07 | 19..... | .13 |
| 17..... | .36 | 4..... | .02 | 20..... | .11 | 23..... | .02 |
| | | 5..... | .80 | 23..... | .08 | 29..... | .02 |
| 1851. | | 6..... | 1.20 | 29..... | .35 | Apr. 8..... | .01 |
| Jan. 4..... | .11 | 7..... | .75 | May 1..... | .02 | 9..... | .01 |
| 5..... | .18 | 8..... | 1.15 | 10..... | .02 | 10..... | .03 |
| 6..... | .09 | 9..... | .70 | 11..... | .25 | 11..... | .20 |
| 7..... | .22 | 10..... | .32 | 12..... | .03 | 19..... | .05 |
| 26..... | .12 | 14..... | .10 | 20..... | .02 | 20..... | .43 |
| | | 15..... | .04 | 24..... | .03 | 21..... | .25 |

Rainfall record of Thomas Tennent, made at the foot of Market street, San Francisco, beginning October 1, 1849—Continued.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|--------------|-----------|---------------|-----------|--------------|-----------|--------------|-----------|
| 1854. | Inches. | 1855. | Inches. | 1856. | Inches. | 1858. | Inches. |
| Apr. 21..... | 0.42 | Nov. 21..... | 0.10 | Dec. 23..... | 0.20 | Feb. 7..... | 0.03 |
| 28..... | 1.72 | 22..... | .21 | 24..... | .24 | 13..... | .25 |
| May 19..... | .02 | 23..... | .13 | 27..... | .20 | 14..... | .30 |
| June 11..... | .03 | 28..... | .08 | 29..... | .08 | 15..... | .44 |
| 17..... | .05 | 30..... | .08 | 30..... | .48 | 16..... | .41 |
| Aug. 1..... | .01 | Dec. 3..... | .10 | 31..... | 1.39 | 17..... | .25 |
| Sept. 3..... | .04 | 4..... | .07 | | | 19..... | .20 |
| 10..... | .06 | 5..... | .17 | 1857. | | 20..... | .15 |
| 15..... | .05 | 6..... | .30 | | | Mar. 12..... | .52 |
| Oct. 4..... | .18 | 7..... | 1.15 | Jan. 2..... | .15 | 16..... | .17 |
| 9..... | .22 | 10..... | .23 | 3..... | .44 | 17..... | .04 |
| 10..... | .23 | 13..... | .22 | 4..... | .21 | 24..... | .40 |
| 13..... | .20 | 14..... | .05 | 5..... | .12 | 26..... | .37 |
| 22..... | .10 | 15..... | .20 | 16..... | .24 | 27..... | 1.80 |
| 23..... | .31 | 19..... | .24 | 17..... | 1.19 | 28..... | .60 |
| 24..... | .65 | 20..... | .38 | 18..... | .10 | 29..... | 1.65 |
| 25..... | .22 | 21..... | .75 | Feb. 4..... | .37 | Apr. 1..... | .42 |
| 26..... | .32 | 22..... | .10 | 5..... | .43 | 4..... | .27 |
| Nov. 18..... | .32 | 26..... | .80 | 10..... | .07 | 7..... | .72 |
| 22..... | .02 | 27..... | 1.00 | 11..... | .05 | 8..... | .14 |
| Dec. 2..... | .02 | | | 12..... | .31 | May 19..... | .23 |
| 3..... | .04 | 1856. | | 13..... | .53 | 20..... | .06 |
| 7..... | .06 | Jan. 8..... | .38 | 14..... | 1.27 | 21..... | .05 |
| 31..... | .75 | 9..... | 1.05 | 15..... | 1.30 | June 18..... | .05 |
| 1855. | | 10..... | 1.04 | 16..... | .84 | July 27..... | .02 |
| Jan. 1..... | 1.26 | 11..... | .72 | 18..... | .04 | 28..... | .03 |
| 2..... | .32 | 14..... | .67 | 19..... | .04 | Aug. 14..... | .04 |
| 3..... | .80 | 15..... | .32 | 24..... | .87 | 26..... | .12 |
| 4..... | .15 | 20..... | .55 | 25..... | 1.17 | Oct. 20..... | .30 |
| 5..... | .03 | 21..... | .10 | 26..... | .85 | 21..... | 2.06 |
| 6..... | .08 | 22..... | 1.14 | 27..... | .45 | 23..... | .12 |
| 7..... | .32 | 23..... | 1.47 | Mar. 1..... | .13 | 24..... | .26 |
| 8..... | .29 | 24..... | 1.22 | 8..... | .03 | Nov. 19..... | .27 |
| 9..... | .17 | 25..... | 1.08 | 21..... | .18 | 20..... | .20 |
| 30..... | .19 | 26..... | .66 | 22..... | .03 | 21..... | .14 |
| 31..... | .06 | Feb. 4..... | .03 | 23..... | .29 | 22..... | .04 |
| Feb. 1..... | .09 | 19..... | .12 | 24..... | .29 | 26..... | .04 |
| 7..... | .05 | 20..... | .33 | 27..... | .36 | Dec. 4..... | .07 |
| 8..... | .24 | 28..... | .02 | 28..... | .47 | 5..... | .27 |
| 10..... | .22 | Mar. 14..... | 1.02 | 31..... | .13 | 10..... | 1.80 |
| 22..... | .15 | 28..... | .05 | May 6..... | .01 | 11..... | 1.02 |
| 23..... | .11 | 29..... | .10 | 10..... | .02 | 12..... | .08 |
| 25..... | .25 | 30..... | .20 | June 29..... | .12 | 14..... | .17 |
| 26..... | 1.29 | 31..... | .23 | Aug. 10..... | .03 | 17..... | .06 |
| 27..... | .52 | Apr. 2..... | .32 | 28..... | .02 | 21..... | .05 |
| 28..... | 1.85 | 9..... | .21 | Oct. 6..... | .17 | 23..... | .42 |
| Mar. 1..... | .54 | 10..... | .58 | 7..... | .44 | 24..... | .64 |
| 2..... | .34 | 11..... | 1.04 | 8..... | .32 | 26..... | .28 |
| 3..... | .16 | 12..... | .17 | Nov. 2..... | .10 | 27..... | 1.04 |
| 4..... | .56 | 30..... | .62 | 3..... | .35 | 28..... | .20 |
| 5..... | .10 | May 19..... | .28 | 4..... | .88 | 31..... | .04 |
| 7..... | .23 | 21..... | .08 | 5..... | .31 | | |
| 8..... | .03 | 22..... | .40 | 24..... | .15 | 1859. | |
| 12..... | .20 | June 1..... | .03 | 25..... | .49 | Jan. 27..... | .05 |
| 13..... | .04 | July 26..... | .02 | 26..... | .14 | 28..... | .21 |
| 14..... | .03 | Sept. 10..... | .02 | 27..... | .17 | 30..... | .17 |
| 30..... | 1.21 | 11..... | .05 | 28..... | .04 | 31..... | .85 |
| 31..... | 1.20 | Oct. 7..... | .31 | 29..... | .33 | Feb. 1..... | .24 |
| Apr. 1..... | .10 | 14..... | .01 | 30..... | .05 | 6..... | .16 |
| 10..... | .80 | 16..... | .02 | Dec. 4..... | .15 | 7..... | .08 |
| 11..... | .38 | 17..... | .03 | 5..... | .20 | 8..... | .54 |
| 12..... | .17 | 24..... | .08 | 6..... | .26 | 9..... | .11 |
| 13..... | .50 | Nov. 15..... | .16 | 9..... | .22 | 10..... | .12 |
| 14..... | 1.65 | 16..... | .06 | 10..... | .43 | 11..... | .62 |
| 15..... | 1.05 | 17..... | .20 | 11..... | 1.68 | 12..... | .78 |
| 16..... | .19 | 20..... | .90 | 12..... | .22 | 13..... | .14 |
| 17..... | .10 | 21..... | .17 | 24..... | .98 | 15..... | .34 |
| 27..... | .05 | 22..... | .70 | 1858. | | 16..... | .14 |
| May 2..... | .03 | 24..... | .22 | | | 17..... | 1.04 |
| 11..... | .05 | Dec. 28..... | .06 | Jan. 7..... | .03 | 23..... | .13 |
| 13..... | .30 | 29..... | .32 | 10..... | .25 | 24..... | .34 |
| 14..... | 1.15 | Dec. 7..... | .15 | 11..... | .37 | 25..... | .12 |
| 19..... | .10 | 11..... | .28 | 12..... | .40 | 26..... | .08 |
| 20..... | .25 | 12..... | .21 | 13..... | .51 | 27..... | 1.11 |
| Nov. 10..... | .02 | 14..... | .04 | 20..... | .83 | 28..... | .23 |
| 13..... | .05 | 15..... | .03 | 21..... | .55 | Mar. 3..... | .21 |
| | | 17..... | .45 | 22..... | 1.42 | 4..... | .29 |

Rainfall record of Thomas Tennent, made at the foot of Market street, San Francisco, beginning October 1, 1849—Continued.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|---------------|-----------|--------------|-----------|--------------|-----------|---------------|-----------|
| 1859. | Inches. | 1860. | Inches. | 1861. | Inches. | 1862. | Inches. |
| Mar. 7..... | 0.20 | Apr. 8..... | 0.44 | Mar. 30..... | 0.03 | Mar. 28..... | 0.07 |
| 8..... | .20 | 19..... | .09 | Apr. 2..... | .16 | 29..... | .20 |
| 20..... | .15 | May 2..... | .12 | 3..... | .15 | 30..... | .20 |
| 21..... | 1.07 | 3..... | .62 | 4..... | .03 | Apr. 1..... | .11 |
| 22..... | .73 | 4..... | .43 | 24..... | .17 | 2..... | .13 |
| 26..... | .03 | 5..... | .12 | May 3..... | .10 | 3..... | .07 |
| 27..... | .04 | 11..... | .17 | 20..... | .65 | 4..... | .01 |
| 29..... | .03 | 18..... | .39 | 21..... | .25 | 8..... | .09 |
| 30..... | .07 | 22..... | .35 | June 5..... | .04 | 9..... | .17 |
| Apr. 8..... | .13 | 23..... | .28 | 12..... | .04 | 11..... | .01 |
| 10..... | .03 | 24..... | .04 | Sept. 2..... | .02 | 13..... | .02 |
| 11..... | .02 | 25..... | .28 | Nov. 10..... | .27 | 14..... | .12 |
| 30..... | .09 | 26..... | .06 | 12..... | .74 | May 2..... | .02 |
| May 1..... | .38 | June 6..... | .07 | 13..... | .29 | 3..... | .56 |
| 2..... | 1.07 | 28..... | .02 | 14..... | .05 | 11..... | .03 |
| 22..... | .06 | July 10..... | .21 | 15..... | .08 | 12..... | .11 |
| 23..... | .04 | Oct. 3..... | .01 | 16..... | .39 | 18..... | .02 |
| Aug. 3..... | .02 | 4..... | .12 | 17..... | .22 | June 11..... | .05 |
| Sept. 15..... | .03 | 5..... | .08 | 19..... | .56 | Oct. 4..... | .05 |
| Oct. 23..... | .05 | 6..... | .01 | 26..... | .48 | 16..... | .07 |
| Nov. 2..... | .06 | 17..... | .04 | 27..... | .60 | 29..... | .02 |
| 3..... | .36 | 19..... | .17 | 29..... | .08 | 30..... | .38 |
| 4..... | .90 | 20..... | .08 | 30..... | .34 | Nov. 6..... | .11 |
| 5..... | .84 | 24..... | .12 | Dec. 1..... | .05 | 7..... | .02 |
| 6..... | .92 | 27..... | .03 | 3..... | .07 | 10..... | .02 |
| 7..... | .80 | 28..... | .11 | 6..... | 1.02 | Dec. 8..... | .19 |
| 8..... | .13 | 29..... | .04 | 7..... | .29 | 18..... | .12 |
| 17..... | .07 | 30..... | .10 | 8..... | 1.65 | 20..... | .05 |
| 21..... | .14 | Nov. 11..... | .21 | 9..... | .18 | 21..... | .32 |
| 22..... | .23 | 12..... | .35 | 16..... | .01 | 22..... | 1.01 |
| 23..... | .25 | 28..... | .02 | 22..... | .03 | 23..... | .17 |
| 24..... | .31 | Dec. 1..... | .02 | 23..... | 1.06 | 24..... | .14 |
| 25..... | 1.73 | 6..... | .04 | 24..... | .56 | 50..... | .22 |
| 26..... | .51 | 7..... | .13 | 26..... | 2.02 | 31..... | .13 |
| 30..... | .03 | 10..... | .02 | 27..... | .23 | | |
| Dec. 4..... | .04 | 11..... | .13 | 28..... | .17 | 1863. | |
| 23..... | .21 | 12..... | .07 | 29..... | .70 | Jan. 1..... | .27 |
| 24..... | .63 | 14..... | .37 | 30..... | 1.25 | 4..... | .12 |
| 25..... | .38 | 15..... | .23 | 31..... | .25 | 5..... | .71 |
| 26..... | .21 | 16..... | .78 | | | 11..... | .46 |
| 27..... | .10 | 17..... | .04 | 1862. | | 19..... | .15 |
| 1860. | | 18..... | .26 | Jan. 5..... | 2.67 | 20..... | .74 |
| Jan. 1..... | .08 | 19..... | .27 | 6..... | 1.49 | 22..... | .36 |
| 2..... | .07 | 20..... | .21 | 8..... | 1.35 | 23..... | .76 |
| 3..... | .24 | 21..... | .15 | 9..... | 3.50 | Feb. 5..... | .44 |
| 4..... | .21 | 22..... | .58 | 10..... | 2.46 | 6..... | .16 |
| 5..... | .56 | 23..... | 1.03 | 11..... | 1.25 | 8..... | .11 |
| 6..... | .22 | 24..... | .77 | 13..... | .22 | 11..... | .16 |
| 7..... | .23 | 25..... | .63 | 15..... | .49 | 12..... | .71 |
| 22..... | .03 | 26..... | .13 | 16..... | 2.46 | 14..... | .11 |
| Feb. 7..... | .60 | 31..... | .23 | 17..... | 2.64 | 16..... | .40 |
| 12..... | .10 | | | 18..... | .52 | 17..... | .58 |
| 13..... | .43 | 1861. | | 19..... | .72 | 20..... | .47 |
| 16..... | .04 | Jan. 1..... | .21 | 20..... | 1.69 | 18..... | .05 |
| 17..... | .17 | 4..... | 1.03 | 21..... | .55 | 20..... | .05 |
| 18..... | .14 | 5..... | .49 | 22..... | 1.00 | Mar. 7..... | .16 |
| 29..... | .12 | 6..... | .23 | 27..... | .04 | 17..... | .19 |
| Mar. 1..... | .40 | 15..... | .03 | 29..... | .76 | 18..... | .11 |
| 5..... | .37 | 19..... | .14 | 30..... | .55 | 19..... | .56 |
| 6..... | .03 | 20..... | .22 | Feb. 2..... | .79 | 24..... | .04 |
| 10..... | .13 | 23..... | .12 | 5..... | .04 | 25..... | .07 |
| 12..... | .03 | Feb. 7..... | .06 | 19..... | .44 | 26..... | .88 |
| 15..... | .10 | 9..... | .12 | 21..... | 2.09 | Apr. 8..... | .19 |
| 16..... | .17 | 10..... | .14 | 22..... | .80 | 13..... | .12 |
| 22..... | .39 | 11..... | 2.02 | 23..... | .84 | 14..... | .10 |
| 23..... | .11 | 21..... | .21 | 24..... | .33 | 15..... | .38 |
| 27..... | .05 | 23..... | .08 | 25..... | 1.49 | 16..... | .32 |
| 28..... | .90 | 24..... | .10 | 26..... | .38 | 20..... | .24 |
| 29..... | .62 | 25..... | .99 | 27..... | .33 | 21..... | .10 |
| 31..... | .69 | Mar. 25..... | .99 | Mar. 7..... | .02 | 26..... | .12 |
| Apr. 1..... | .49 | 23..... | .79 | 9..... | .01 | 27..... | .04 |
| 3..... | .05 | 24..... | .47 | 10..... | .47 | May 18..... | .14 |
| 4..... | 1.32 | 25..... | .04 | 11..... | .57 | 19..... | .09 |
| 5..... | .65 | 26..... | 2.53 | 12..... | .18 | Sept. 19..... | .03 |
| 6..... | .06 | 27..... | .40 | 14..... | .25 | Nov. 11..... | .05 |
| 7..... | .04 | 28..... | .04 | 15..... | .11 | 12..... | .07 |
| | | 29..... | .18 | 16..... | .12 | | |

*Rainfall record of Thomas Tennent, made at the foot of Market street, San Francisco,
beginning October 1, 1849—Continued.*

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|--------------|-----------|---------------|-----------|--------------|-----------|---------------|-----------|
| 1863. | Inches. | 1865. | Inches. | 1866. | Inches. | 1867. | Inches. |
| Nov. 14..... | 0.87 | Jan. 26..... | 0.38 | Mar. 18..... | 0.21 | Mar. 21..... | 0.34 |
| 15..... | .92 | 27..... | .74 | 19..... | .41 | 30..... | .05 |
| 16..... | .64 | 28..... | .91 | 20..... | .23 | 31..... | .30 |
| Dec. 1..... | .33 | 31..... | 1.50 | 25..... | .36 | Apr. 1..... | .32 |
| 9..... | .15 | Feb. 13..... | .30 | 29..... | .02 | 2..... | .15 |
| 10..... | .05 | 14..... | .10 | 30..... | .11 | 5..... | .40 |
| 11..... | .02 | 15..... | .08 | 31..... | .49 | 6..... | .15 |
| 13..... | .27 | 16..... | .12 | Apr. 29..... | .12 | 9..... | .92 |
| 21..... | .37 | 18..... | .40 | May 21..... | .06 | 10..... | .67 |
| 23..... | .52 | 19..... | .24 | 22..... | .22 | 11..... | .50 |
| 24..... | .09 | 27..... | .05 | 25..... | 1.05 | 12..... | .15 |
| 1864. | | 28..... | .05 | 26..... | .01 | Sept. 14..... | .04 |
| Jan. 1..... | .12 | Mar. 3..... | .21 | 27..... | .05 | Oct. 5..... | .20 |
| 5..... | .39 | 4..... | .38 | 28..... | .07 | Nov. 5..... | .62 |
| 15..... | .14 | 12..... | .07 | June 8..... | .04 | 6..... | .75 |
| 29..... | .37 | 19..... | .08 | Sept. 6..... | .07 | 19..... | .79 |
| 31..... | .81 | Apr. 6..... | .21 | 15..... | .04 | 21..... | .75 |
| Mar. 15..... | .03 | 7..... | .62 | Nov. 2..... | .68 | 24..... | .44 |
| 17..... | .04 | 9..... | .11 | 3..... | .25 | 25..... | .06 |
| 18..... | .89 | May 18..... | .45 | 4..... | .14 | Dec. 1..... | .02 |
| 20..... | .02 | 19..... | .18 | 5..... | .31 | 2..... | .18 |
| 27..... | .06 | Sept. 24..... | .06 | 9..... | .07 | 7..... | .15 |
| 28..... | .14 | 26..... | .18 | 16..... | .26 | 8..... | .55 |
| 29..... | .09 | Oct. 7..... | .03 | 19..... | .02 | 9..... | .21 |
| 30..... | .07 | 8..... | .07 | 24..... | .38 | 10..... | .33 |
| 31..... | .18 | 25..... | .01 | 25..... | .29 | 16..... | .04 |
| Apr. 1..... | .91 | 30..... | .15 | 26..... | .28 | 17..... | 1.02 |
| 3..... | .35 | Nov. 13..... | .18 | 29..... | .14 | 18..... | .69 |
| 4..... | .23 | 14..... | .37 | 30..... | .53 | 20..... | .48 |
| 26..... | .08 | 16..... | .07 | Dec. 1..... | .53 | 21..... | .84 |
| May 10..... | .01 | 17..... | 1.03 | 3..... | .13 | 22..... | 1.68 |
| 11..... | .10 | 18..... | .27 | 11..... | .53 | 23..... | .72 |
| 13..... | .01 | 19..... | .06 | 12..... | .01 | 24..... | .08 |
| 14..... | .11 | 20..... | .06 | 15..... | .63 | 25..... | 1.35 |
| 17..... | .55 | 21..... | .63 | 16..... | .43 | 29..... | .06 |
| Aug. 22..... | .11 | 22..... | 1.12 | 18..... | .95 | 30..... | .21 |
| 23..... | .03 | 30..... | .40 | 19..... | 4.28 | 31..... | 1.45 |
| 24..... | .07 | Dec. 1..... | .01 | 20..... | 3.62 | 1868. | |
| Sept. 7..... | .01 | 2..... | .01 | 21..... | .64 | Jan. 1..... | .93 |
| Oct. 24..... | .02 | 8..... | .04 | 22..... | .31 | 2..... | .33 |
| 26..... | .05 | 13..... | .06 | 24..... | .06 | 3..... | .12 |
| 27..... | .06 | 22..... | .04 | 25..... | .71 | 4..... | .15 |
| Nov. 15..... | .14 | 23..... | .15 | 26..... | .56 | 8..... | .66 |
| 23..... | .05 | 24..... | .25 | 27..... | .32 | 11..... | .12 |
| 25..... | .48 | 26..... | .02 | 28..... | .63 | 12..... | .87 |
| 26..... | 3.98 | 1866. | | 29..... | .40 | 13..... | .43 |
| 27..... | .42 | Jan. 5..... | .30 | 30..... | .42 | 16..... | .12 |
| 28..... | .44 | 6..... | .19 | 1867. | | 18..... | .41 |
| 29..... | .50 | 7..... | .41 | Jan. 1..... | .03 | 19..... | .43 |
| 30..... | .67 | 8..... | 1.51 | 4..... | .18 | 20..... | .64 |
| Dec. 2..... | .33 | 10..... | .40 | 5..... | .65 | 22..... | 1.08 |
| 3..... | .13 | 11..... | .46 | 6..... | .51 | 23..... | .99 |
| 4..... | .03 | 12..... | .60 | 11..... | .11 | 24..... | .84 |
| 5..... | .04 | 13..... | .60 | 12..... | .75 | 25..... | .36 |
| 6..... | .92 | 16..... | .23 | 14..... | .05 | 26..... | 1.02 |
| 10..... | .01 | 17..... | 2.17 | 19..... | .23 | Feb. 7..... | .06 |
| 11..... | 1.05 | 19..... | .11 | 20..... | .18 | 21..... | .64 |
| 12..... | 2.56 | 20..... | 2.22 | 21..... | .58 | 22..... | .54 |
| 13..... | .99 | 21..... | 1.14 | 22..... | .17 | 23..... | .14 |
| 14..... | .04 | 22..... | .15 | 23..... | .40 | 24..... | .86 |
| 15..... | .27 | 23..... | .08 | 24..... | .35 | 25..... | .69 |
| 23..... | .38 | 24..... | .31 | 26..... | .78 | 26..... | 1.61 |
| 25..... | .47 | Feb. 1..... | .36 | 30..... | .19 | 27..... | 1.02 |
| 26..... | .81 | 2..... | .16 | Feb. 18..... | .49 | 28..... | .37 |
| 28..... | .02 | 3..... | .43 | 19..... | .15 | 29..... | .20 |
| 29..... | .04 | 4..... | .19 | 20..... | .12 | Mar. 1..... | .56 |
| 30..... | .30 | 5..... | .22 | 21..... | 2.22 | 2..... | .20 |
| 31..... | .52 | 9..... | .16 | 22..... | .30 | 3..... | 1.55 |
| 1865. | | 12..... | .06 | 25..... | .08 | 4..... | .55 |
| Jan. 1..... | .51 | 27..... | .07 | 26..... | .14 | 11..... | .19 |
| 6..... | .08 | 28..... | .47 | 27..... | 1.02 | 13..... | .56 |
| 18..... | .07 | Mar. 5..... | .02 | 28..... | .68 | 14..... | .44 |
| 24..... | .07 | 6..... | .21 | Mar. 1..... | .17 | 15..... | .14 |
| 25..... | .88 | 8..... | .66 | 2..... | .16 | 20..... | .16 |
| | | 9..... | .30 | 8..... | .40 | 21..... | 1.05 |
| | | 17..... | .02 | 17..... | .16 | 22..... | .90 |

Rainfall record of Thomas Tennent, beginning October 1, 1849, and ending February 28, 1871.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|
| 1868. | | 1869. | | 1871. | | 1872. | |
| | <i>Inches.</i> | | <i>Inches.</i> | | <i>Inches.</i> | | <i>Inches.</i> |
| Apr. 3..... | 0.10 | June 15..... | 0.02 | Jan. 17..... | 0.21 | Feb. 14..... | 0.12 |
| 7..... | .20 | Sept. 1..... | .12 | 18..... | .78 | 15..... | .02 |
| 9..... | .38 | Oct. 18..... | .02 | 22..... | .28 | 16..... | .49 |
| 10..... | .30 | 19..... | .17 | 23..... | .62 | 17..... | .22 |
| 11..... | .70 | 20..... | .36 | 28..... | .44 | 18..... | .08 |
| 12..... | .47 | 21..... | .74 | Feb. 4..... | .37 | 21..... | .42 |
| 13..... | .06 | Nov. 6..... | .14 | 6..... | .12 | 22..... | .73 |
| 14..... | .04 | 10..... | .65 | 8..... | .02 | 24..... | 1.28 |
| 15..... | .06 | 11..... | .20 | 13..... | .14 | 25..... | .02 |
| May 13..... | .01 | 12..... | .05 | 14..... | .13 | 26..... | .13 |
| 19..... | .02 | 13..... | .05 | 15..... | .67 | 27..... | .94 |
| June 1..... | .01 | 27..... | .04 | 20..... | .72 | Mar. 1..... | .16 |
| 12..... | .05 | 28..... | .06 | 21..... | 1.02 | 5..... | .73 |
| 23..... | .17 | Dec. 7..... | .41 | 22..... | .28 | 8..... | .02 |
| Oct. 1..... | .06 | 8..... | 1.10 | 23..... | .29 | 9..... | .28 |
| 2..... | .08 | 10..... | .13 | Mar. 6..... | .26 | 12..... | .19 |
| 4..... | .01 | 11..... | .14 | 12..... | .02 | 27..... | .02 |
| Nov. 4..... | .05 | 22..... | .22 | 14..... | .01 | 31..... | .19 |
| 18..... | .30 | 23..... | .46 | 15..... | .01 | Apr. 13..... | .06 |
| 19..... | .64 | 24..... | .51 | 17..... | .12 | 15..... | .35 |
| 25..... | .08 | 25..... | 1.34 | 18..... | .02 | 16..... | .22 |
| 29..... | .11 | | | 19..... | .28 | 17..... | .04 |
| Dec. 4..... | .01 | 1870. | | 23..... | .57 | 19..... | .30 |
| 17..... | .05 | Jan. 10..... | .09 | 25..... | .02 | 26..... | .09 |
| 18..... | .55 | 11..... | .11 | Apr. 4..... | .13 | 27..... | .02 |
| 21..... | .07 | 12..... | .14 | 5..... | .07 | May 24..... | .02 |
| 22..... | .18 | 13..... | .25 | 6..... | 1.28 | 30..... | .01 |
| 23..... | 1.20 | 14..... | .53 | 8..... | .01 | 31..... | .15 |
| 24..... | .29 | 15..... | .31 | 16..... | .39 | June 4..... | .02 |
| 25..... | .47 | 18..... | .76 | 17..... | .01 | 5..... | .01 |
| 26..... | .92 | 19..... | 1.03 | May 7..... | .01 | 16..... | .01 |
| 29..... | .18 | 20..... | .27 | 16..... | .04 | July 27..... | .01 |
| 30..... | .32 | 22..... | .30 | 27..... | .05 | Sept. 26..... | .04 |
| 31..... | .10 | Feb. 9..... | .41 | 29..... | .13 | Oct. 26..... | .11 |
| | | 10..... | .42 | June 14..... | .01 | Nov. 4..... | .15 |
| 1869. | | 12..... | .14 | 5..... | .02 | 12..... | .03 |
| Jan. 1..... | 1.28 | 14..... | .11 | Oct. 27..... | .07 | 13..... | .01 |
| 2..... | .53 | 15..... | .34 | Nov. 3..... | .09 | 28..... | .01 |
| 7..... | .10 | 19..... | .08 | 4..... | .01 | 29..... | 2.06 |
| 10..... | .01 | 20..... | .80 | 15..... | .27 | 30..... | .13 |
| 11..... | .07 | 21..... | .25 | 25..... | .12 | Dec. 4..... | .02 |
| 14..... | .08 | 22..... | .90 | 26..... | 1.20 | 22..... | .63 |
| 22..... | .15 | 23..... | 1.57 | 27..... | .11 | 23..... | .42 |
| 23..... | 1.45 | 24..... | .10 | 28..... | 1.01 | 24..... | 1.48 |
| 24..... | .19 | Mar. 1..... | .11 | Dec. 2..... | .10 | 25..... | 1.39 |
| 25..... | .25 | 10..... | .02 | 17..... | .25 | 26..... | 1.47 |
| 26..... | .20 | 11..... | .14 | 18..... | 2.83 | 27..... | .06 |
| 27..... | .15 | 12..... | .18 | 19..... | 3.12 | 28..... | .32 |
| 28..... | .54 | 16..... | .22 | 20..... | .30 | 29..... | .06 |
| 29..... | 1.10 | 17..... | 1.05 | 21..... | .91 | 30..... | .05 |
| 30..... | .25 | 23..... | .27 | 23..... | 2.48 | 31..... | .05 |
| Feb. 2..... | .44 | 30..... | .01 | 24..... | .19 | | |
| 3..... | .30 | Apr. 1..... | .48 | 26..... | .04 | 1873. | |
| 7..... | .20 | 2..... | .21 | 27..... | 1.05 | Jan. 1..... | .06 |
| 8..... | .82 | 3..... | .09 | 28..... | .40 | 2..... | .09 |
| 9..... | .32 | 8..... | .01 | 29..... | .82 | 3..... | .06 |
| 10..... | 1.67 | 11..... | .16 | 30..... | .17 | 5..... | .10 |
| 11..... | .15 | 12..... | .58 | 31..... | 1.70 | 8..... | .01 |
| Mar. 12..... | .05 | May 2..... | .02 | 1872. | | 11..... | .12 |
| 13..... | .08 | 19..... | .18 | Jan. 2..... | .01 | 30..... | .12 |
| 14..... | .10 | Sept. 30..... | .03 | 3..... | .71 | 31..... | 1.02 |
| 15..... | .14 | Nov. 4..... | .01 | 5..... | .19 | Feb. 1..... | .02 |
| 16..... | .63 | 6..... | .02 | 6..... | .08 | 2..... | .27 |
| 17..... | .55 | 7..... | .22 | 7..... | .05 | 3..... | .13 |
| 18..... | .18 | 29..... | .18 | 8..... | 2.36 | 4..... | .27 |
| 19..... | .48 | Dec. 1..... | .59 | 9..... | .34 | 5..... | .01 |
| 20..... | .67 | 2..... | .57 | 11..... | .17 | 8..... | .64 |
| 24..... | .01 | 5..... | 1.42 | 12..... | .01 | 9..... | .23 |
| 26..... | .10 | 6..... | .12 | 13..... | .01 | 11..... | .19 |
| 29..... | .15 | 7..... | .32 | 31..... | .07 | 12..... | .16 |
| Apr. 7..... | .28 | 13..... | .09 | Feb. 2..... | .07 | 13..... | .05 |
| 16..... | .45 | 14..... | .27 | 4..... | .16 | 15..... | .12 |
| 17..... | .69 | 1871. | | 7..... | .46 | 16..... | .13 |
| 18..... | .68 | Jan. 9..... | .42 | 8..... | .65 | 18..... | .82 |
| 19..... | .09 | 10..... | .32 | 9..... | .69 | 24..... | .05 |
| May 19..... | .06 | | | 11..... | .42 | 26..... | .02 |
| 21..... | .02 | | | | | 27..... | .75 |

Rainfall record of the Signal Service, San Francisco, beginning March 1, 1871—Cont'd.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|
| 1873. | Inches. | 1874. | Inches. | 1875. | Inches. | 1876. | Inches. |
| Feb. 28..... | 0.08 | Mar. 12..... | 0.65 | Oct. 28..... | 0.02 | Sept. 4..... | 0.20 |
| Mar. 5..... | .47 | 13..... | .05 | Nov. 1..... | .47 | 29..... | .18 |
| 6..... | .10 | 14..... | .53 | 6..... | .16 | Oct. 16..... | .53 |
| 15..... | .11 | 15..... | .08 | 7..... | .01 | 17..... | .49 |
| 16..... | .09 | 16..... | .01 | 11..... | .11 | 18..... | .43 |
| 29..... | .01 | 25..... | .10 | 13..... | .57 | 25..... | .09 |
| 30..... | .01 | 26..... | .02 | 14..... | .10 | 27..... | 1.06 |
| Apr. 2..... | .05 | 27..... | .39 | 15..... | .29 | 28..... | .56 |
| 20..... | .14 | Apr. 3..... | .04 | 16..... | .47 | 29..... | .20 |
| 21..... | .22 | 5..... | .04 | 17..... | 2.30 | Nov. 4..... | .06 |
| 28..... | .02 | 12..... | .70 | 18..... | 1.13 | 16..... | .19 |
| June 2..... | .01 | 13..... | .02 | 19..... | .05 | | |
| 16..... | .01 | 30..... | .10 | 20..... | .03 | 1877. | |
| July 22..... | .01 | May 1..... | .23 | 23..... | .05 | Jan. 16..... | .34 |
| Aug. 5..... | .05 | 4..... | .03 | 24..... | .17 | 17..... | .57 |
| 25..... | .03 | 5..... | .13 | 25..... | .01 | 18..... | .21 |
| Oct. 6..... | .06 | 6..... | .20 | 26..... | 1.18 | 19..... | .35 |
| 7..... | .77 | 22..... | .04 | 30..... | .27 | 21..... | .08 |
| Nov. 6..... | .32 | 23..... | .03 | Dec. 1..... | .52 | 28..... | .44 |
| 21..... | .04 | June 6..... | .09 | 3..... | .44 | 29..... | .62 |
| 29..... | .01 | 7..... | .04 | 4..... | .10 | 30..... | 1.63 |
| 30..... | .79 | 23..... | .01 | 19..... | .38 | 31..... | .08 |
| Dec. 1..... | .03 | Sept. 3..... | .02 | 24..... | .06 | Feb. 1..... | .33 |
| 3..... | 1.61 | Oct. 1..... | .02 | 25..... | .83 | 2..... | .01 |
| 4..... | .85 | 9..... | .17 | 26..... | .19 | 12..... | .52 |
| 5..... | 1.01 | 13..... | .02 | 28..... | 1.50 | 13..... | .10 |
| 6..... | .15 | 16..... | .03 | 29..... | .02 | 20..... | .01 |
| 7..... | .42 | 18..... | .11 | 31..... | .11 | 22..... | .05 |
| 8..... | .10 | 21..... | .28 | | | 25..... | .16 |
| 9..... | .91 | 22..... | .03 | 1876. | | Mar. 1..... | .04 |
| 13..... | .06 | 25..... | 1.58 | Jan. 1..... | .22 | 2..... | .32 |
| 14..... | .27 | 26..... | .25 | 2..... | .52 | 6..... | .15 |
| 15..... | .14 | 27..... | .20 | 3..... | 1.47 | 9..... | .01 |
| 16..... | .57 | Nov. 4..... | .04 | 4..... | .13 | 10..... | .56 |
| 18..... | .04 | 5..... | 1.34 | 6..... | .20 | Apr. 3..... | .03 |
| 19..... | .39 | 7..... | .04 | 7..... | 1.29 | 8..... | .08 |
| 22..... | .34 | 22..... | .10 | 8..... | .15 | 14..... | .04 |
| 28..... | .29 | 23..... | 3.98 | 19..... | .25 | 15..... | .02 |
| 29..... | 1.16 | 24..... | 1.05 | 20..... | .18 | 16..... | .07 |
| 30..... | 1.34 | Dec. 1..... | .06 | 21..... | .04 | 19..... | .02 |
| 31..... | .04 | 2..... | .05 | 22..... | .65 | May 28..... | .18 |
| 1874. | | 3..... | .05 | 23..... | 1.50 | June 27..... | .01 |
| Jan. 1..... | .89 | 15..... | .02 | 24..... | .42 | July 16..... | .02 |
| 2..... | .77 | 25..... | .15 | 25..... | .12 | Oct. 21..... | .27 |
| 14..... | .05 | 1875. | | 26..... | .36 | 22..... | .35 |
| 15..... | .38 | Jan. 10..... | .01 | 27..... | .04 | 23..... | .01 |
| 16..... | .39 | 11..... | .04 | 31..... | .01 | 25..... | .02 |
| 17..... | .79 | 13..... | .07 | Feb. 7..... | .21 | Nov. 2..... | .08 |
| 18..... | .04 | 14..... | 1.48 | 8..... | 1.80 | 4..... | .21 |
| 19..... | .82 | 16..... | .20 | 9..... | .21 | 5..... | .25 |
| 20..... | .02 | 18..... | 1.87 | 11..... | 1.35 | 6..... | .07 |
| 21..... | .08 | 19..... | 1.92 | 12..... | .01 | 11..... | .56 |
| 22..... | .01 | 20..... | .01 | 24..... | .30 | 14..... | .04 |
| 25..... | .31 | 22..... | .53 | 25..... | .13 | 15..... | .06 |
| 26..... | .03 | 23..... | 1.76 | 27..... | .90 | 16..... | .17 |
| 27..... | .11 | 24..... | .06 | 28..... | .01 | 22..... | Trace. |
| 28..... | .62 | 25..... | .06 | Mar. 2..... | .94 | 23..... | .13 |
| 30..... | .24 | Feb. 1..... | .27 | 3..... | 1.03 | Dec. 1..... | .23 |
| 31..... | .11 | 2..... | .04 | 4..... | .32 | 16..... | .23 |
| Feb. 2..... | .30 | 25..... | .01 | 5..... | .02 | 17..... | .99 |
| 6..... | .01 | Mar. 2..... | .45 | 6..... | .84 | 21..... | .36 |
| 9..... | .11 | 4..... | .23 | 7..... | 1.13 | 23..... | .49 |
| 10..... | .15 | 22..... | .01 | 8..... | .60 | 28..... | .36 |
| 11..... | .03 | 24..... | .22 | 12..... | .22 | | |
| 12..... | .23 | 25..... | .01 | 13..... | .17 | 1878. | |
| 13..... | .81 | 27..... | .05 | 29..... | .22 | Jan. 6..... | .02 |
| 14..... | .20 | 28..... | .33 | Apr. 2..... | .23 | 7..... | .28 |
| 16..... | .08 | Apr. 5..... | .06 | 7..... | .60 | 8..... | .59 |
| 17..... | .28 | 30..... | .04 | 18..... | .09 | 10..... | .34 |
| 25..... | .01 | May 6..... | .01 | 21..... | .15 | 13..... | Trace. |
| Mar. 1..... | .58 | 8..... | .14 | 29..... | .04 | 14..... | .52 |
| 3..... | .26 | 14..... | .07 | May 19..... | .15 | 15..... | 1.94 |
| 5..... | .13 | June 13..... | .09 | 20..... | .09 | 16..... | 1.97 |
| 7..... | .06 | 15..... | .53 | June 20..... | .04 | 17..... | Trace. |
| 8..... | .24 | 16..... | .40 | July 6..... | .01 | 18..... | .28 |
| 11..... | .26 | Oct. 27..... | .22 | Aug. 14..... | .01 | 19..... | .10 |

Rainfall record of the Signal Service, San Francisco, beginning March 1, 1871—Cont'd.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|---------------|-----------|---------------|-----------|-------------|-----------|---------------|-----------|
| 1878. | | 1879. | | 1879. | | 1880. | |
| Jan. 20..... | Trace. | Jan. 9..... | 0.22 | Dec. 7..... | 0.23 | Dec. 15..... | 0.36 |
| 21..... | 0.13 | 10..... | .83 | 8..... | .14 | 16..... | .26 |
| 22..... | 1.15 | 11..... | .01 | 9..... | .09 | 17..... | .43 |
| 23..... | Trace. | 12..... | .28 | 10..... | .09 | 18..... | .25 |
| 24..... | 1.68 | 13..... | .05 | 18..... | .04 | 19..... | 1.66 |
| 25..... | .02 | 22..... | .04 | 19..... | 1.55 | 20..... | .79 |
| 26..... | .13 | 23..... | 1.04 | 20..... | .11 | 21..... | Trace. |
| 27..... | 1.13 | 24..... | .29 | 21..... | .42 | 22..... | .27 |
| 28..... | .17 | 25..... | .33 | 22..... | .20 | 23..... | .47 |
| 29..... | .02 | 26..... | .15 | 28..... | .23 | 24..... | .98 |
| 30..... | .78 | 27..... | Trace. | | | 25..... | .42 |
| 31..... | .72 | 28..... | .26 | 1880. | | 27..... | .41 |
| Feb. 4..... | .95 | 30..... | .02 | Jan. 7..... | .24 | 29..... | 1.16 |
| 5..... | Trace. | Feb. 8..... | .10 | 8..... | .12 | 1881. | |
| 6..... | .66 | 9..... | 1.66 | 10..... | .03 | Jan. 13..... | .77 |
| 7..... | .33 | 10..... | .11 | 9..... | 1.03 | 14..... | .74 |
| 8..... | .14 | 11..... | .78 | 25..... | .16 | 15..... | .09 |
| 10..... | .02 | 12..... | .98 | 26..... | .47 | 16..... | .17 |
| 11..... | 1.78 | 13..... | .04 | 27..... | .06 | 17..... | .04 |
| 12..... | .17 | 15..... | .51 | Feb. 9..... | .31 | 19..... | .01 |
| 13..... | .61 | 16..... | .04 | 10..... | .18 | 20..... | .01 |
| 14..... | 1.92 | 17..... | .66 | 15..... | .14 | 26..... | .01 |
| 16..... | .42 | 18..... | .02 | 18..... | .58 | 28..... | 1.18 |
| 17..... | .92 | Mar. 2..... | .13 | 19..... | .22 | 29..... | 4.67 |
| 18..... | 1.25 | 4..... | 1.57 | 21..... | .33 | 30..... | .96 |
| 19..... | .39 | 5..... | 2.73 | 22..... | .06 | 31..... | .05 |
| 20..... | .14 | 6..... | 1.14 | 23..... | .05 | Feb. 1..... | .01 |
| 23..... | .60 | 7..... | .95 | Mar. 2..... | .09 | 2..... | Trace. |
| 24..... | .40 | 8..... | .13 | 3..... | .57 | 3..... | 1.00 |
| 26..... | 1.16 | 9..... | 1.05 | 4..... | .01 | 4..... | .06 |
| 27..... | .47 | 18..... | .25 | 17..... | .38 | 5..... | .11 |
| 28..... | .19 | 19..... | .20 | 23..... | .23 | 7..... | .29 |
| Mar. 3..... | .57 | 20..... | .16 | 24..... | .15 | 8..... | .08 |
| 4..... | .03 | 21..... | .03 | 27..... | .09 | 9..... | .01 |
| 5..... | Trace. | 22..... | .32 | 28..... | .48 | 12..... | .10 |
| 6..... | 1.01 | 24..... | .01 | 29..... | .05 | 13..... | .38 |
| 7..... | .07 | Trace. | Trace. | 31..... | .03 | 15..... | .28 |
| 10..... | .07 | 26..... | .08 | Apr. 1..... | .25 | 16..... | 1.37 |
| 13..... | .73 | Apr. 4..... | .03 | 2..... | 1.85 | 25..... | .12 |
| 14..... | .26 | 5..... | .11 | 3..... | .12 | 26..... | .83 |
| 17..... | .05 | 6..... | .30 | 4..... | Trace. | 27..... | .01 |
| 18..... | .01 | 7..... | .10 | 5..... | .05 | Mar. 1..... | .02 |
| 19..... | Trace. | 8..... | .07 | 6..... | .59 | 8..... | .05 |
| 20..... | .16 | 10..... | .24 | 9..... | .77 | 9..... | .67 |
| 21..... | .30 | 13..... | .13 | 10..... | Trace. | 11..... | Trace. |
| 24..... | .28 | 14..... | .12 | 12..... | .11 | 15..... | .11 |
| 25..... | .15 | 18..... | .01 | 13..... | .07 | 24..... | Trace. |
| 26..... | .15 | 19..... | .26 | 14..... | .59 | 26..... | .01 |
| 27..... | .37 | 20..... | .52 | 15..... | 1.33 | 27..... | .04 |
| 28..... | .02 | May 6..... | .05 | 16..... | .27 | Apr. 5..... | .22 |
| 29..... | .15 | 17..... | .33 | 17..... | .06 | 6..... | .02 |
| 30..... | .18 | 18..... | .22 | 18..... | .09 | 8..... | Trace. |
| Apr. 4..... | Trace. | 19..... | .74 | 19..... | .48 | 9..... | .25 |
| 14..... | .16 | 28..... | .41 | 20..... | 1.81 | 10..... | .34 |
| 15..... | .29 | June 10..... | .05 | 21..... | 1.39 | 16..... | Trace. |
| 19..... | .61 | July 9..... | .01 | 22..... | .23 | 17..... | 1.09 |
| 20..... | Trace. | Aug. 22..... | .02 | May 2..... | Trace. | 18..... | .01 |
| May 20..... | .05 | Sept. 23..... | Trace. | 4..... | .05 | 22..... | .01 |
| 21..... | .09 | Oct. 6..... | .43 | 5..... | .11 | 23..... | .06 |
| 30..... | .02 | 7..... | .13 | 10..... | .03 | May 9..... | .05 |
| June 6..... | Trace. | 11..... | .07 | 11..... | .84 | 21..... | Trace. |
| 7..... | .01 | 12..... | .15 | 12..... | .09 | 31..... | .17 |
| July 17..... | .01 | 15..... | Trace. | Oct. 1..... | Trace. | June 3..... | .41 |
| Sept. 17..... | Trace. | Nov. 5..... | .03 | 4..... | Trace. | 7..... | .28 |
| 27..... | .03 | 6..... | .14 | 8..... | .05 | 10..... | Trace. |
| 28..... | .07 | 8..... | .07 | Nov. 1..... | .01 | Sept. 22..... | .25 |
| 29..... | .11 | 9..... | .94 | 23..... | .31 | Oct. 3..... | .10 |
| 30..... | .34 | 11..... | .05 | 24..... | .01 | 15..... | Trace. |
| Oct. 14..... | 1.27 | 12..... | .16 | Dec. 1..... | 1.22 | 25..... | .01 |
| Nov. 4..... | .11 | 13..... | .19 | 2..... | 1.50 | 26..... | .20 |
| 5..... | .01 | 14..... | .21 | 3..... | .72 | 27..... | .01 |
| 14..... | .45 | 29..... | .86 | 4..... | .04 | 28..... | .12 |
| Dec. 6..... | .14 | 30..... | 1.38 | 5..... | .50 | 30..... | .10 |
| 7..... | .01 | Dec. 1..... | .08 | 8..... | Trace. | Nov. 15..... | 1.34 |
| 9..... | .08 | 2..... | .23 | 9..... | .08 | 16..... | .30 |
| 29..... | .04 | 3..... | .37 | 14..... | 1.81 | 17..... | .02 |
| 30..... | .31 | 5..... | .68 | | | | |

Rainfall record of the Signal Service, San Francisco, beginning March 1, 1871—Cont'd.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|---------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|
| 1881. | Inches. | 1882. | Inches. | 1883. | Inches. | 1884. | Inches. |
| Nov. 23..... | 0.10 | Oct. 10..... | 0.19 | Oct. 25..... | 0.08 | June 11..... | 0.27 |
| 29..... | .02 | 13..... | .39 | 26..... | 1.19 | 12..... | .96 |
| 30..... | .16 | 24..... | .03 | 27..... | .05 | 13..... | .48 |
| Dec. 1..... | .27 | 30..... | .01 | 28..... | Trace. | 21..... | Trace. |
| 2..... | .02 | Nov. 1..... | .37 | Nov. 7..... | .87 | 22..... | .09 |
| 3..... | .18 | 2..... | 1.85 | 8..... | .45 | 23..... | .10 |
| 4..... | .87 | 3..... | 1.63 | 24..... | .28 | 24..... | Trace. |
| 5..... | .60 | 7..... | Trace. | Dec. 2..... | .11 | Aug. 4..... | .03 |
| 6..... | .02 | 9..... | .13 | 21..... | .28 | 24..... | .01 |
| 9..... | .15 | 21..... | .01 | 23..... | .15 | Sept. 7..... | .12 |
| 10..... | .03 | 23..... | .15 | 24..... | .17 | 8..... | .09 |
| 11..... | .31 | 26..... | .03 | 25..... | .12 | 30..... | .12 |
| 15..... | .52 | 29..... | .01 | 26..... | .01 | Oct. 12..... | .07 |
| 24..... | .33 | 30..... | Trace. | 27..... | .07 | 13..... | 1.10 |
| 26..... | .37 | Dec. 11..... | .07 | 28..... | .01 | 14..... | .64 |
| 27..... | .18 | 12..... | .01 | 29..... | Trace. | 15..... | .74 |
| | | 18..... | .30 | | | Nov. 9..... | .07 |
| 1882. | | 19..... | .55 | 1884. | | 12..... | .19 |
| Jan. 2..... | .12 | 20..... | .01 | Jan. 3..... | .10 | Dec. 16..... | .10 |
| 3..... | .08 | 22..... | .08 | 5..... | .48 | 17..... | .60 |
| 4..... | .14 | 24..... | .09 | 8..... | .04 | 18..... | .57 |
| 5..... | .03 | 31..... | .14 | 25..... | .08 | 19..... | .63 |
| 6..... | .06 | | .76 | 26..... | .50 | 20..... | 1.62 |
| 23..... | .40 | 1883. | | 27..... | .38 | 21..... | .28 |
| 24..... | .22 | Jan. 1..... | .57 | 28..... | .09 | 22..... | .48 |
| 25..... | .06 | Trace. | | 29..... | 1.44 | 23..... | 2.01 |
| 26..... | .33 | 4..... | Trace. | 30..... | .75 | 24..... | .52 |
| 31..... | .24 | 17..... | .03 | 31..... | .02 | 25..... | .37 |
| Feb. 9..... | .03 | 24..... | .91 | Feb. 1..... | .18 | 26..... | .41 |
| 10..... | .80 | 25..... | .39 | 2..... | .02 | 27..... | .02 |
| 11..... | .07 | 29..... | .02 | 3..... | .29 | 28..... | .07 |
| 12..... | .28 | Feb. 6..... | .13 | 4..... | .66 | | |
| 13..... | .05 | 10..... | Trace. | 5..... | .83 | 1885. | |
| 16..... | .41 | 11..... | Trace. | 6..... | .22 | Jan. 1..... | .42 |
| 23..... | .10 | 12..... | Trace. | 7..... | .20 | 2..... | .03 |
| 24..... | .52 | 13..... | .40 | 10..... | .01 | 7..... | .05 |
| 25..... | .06 | 14..... | .51 | 11..... | .01 | 8..... | .01 |
| 26..... | .60 | Mar. 11..... | Trace. | 14..... | .65 | 9..... | .52 |
| 27..... | .04 | 12..... | .01 | 15..... | 1.17 | 10..... | .50 |
| Mar. 1..... | .04 | 25..... | Trace. | 16..... | 1.29 | 11..... | .29 |
| 2..... | .02 | 26..... | 1.55 | 17..... | .78 | 13..... | .47 |
| 4..... | Trace. | 27..... | .48 | 18..... | .23 | 27..... | .15 |
| 9..... | .13 | 28..... | .46 | 20..... | .11 | 28..... | .02 |
| 10..... | .73 | 29..... | .30 | Mar. 3..... | .04 | 29..... | .06 |
| 11..... | .34 | 30..... | .18 | 4..... | .02 | 30..... | .01 |
| 12..... | .13 | 31..... | .03 | 5..... | .07 | Feb. 1..... | .02 |
| 13..... | .66 | Apr. 2..... | .09 | 6..... | .45 | 2..... | .06 |
| 14..... | .49 | 3..... | .46 | 7..... | .51 | 18..... | .09 |
| 15..... | .63 | 7..... | Trace. | 8..... | 1.39 | 19..... | .06 |
| 16..... | .06 | 8..... | Trace. | 9..... | 1.94 | 20..... | .06 |
| 17..... | Trace. | 11..... | .02 | 10..... | .07 | 21..... | .01 |
| 18..... | .18 | 12..... | .10 | 14..... | 1.03 | Mar. 9..... | Trace. |
| 19..... | .04 | 19..... | .76 | 15..... | .04 | 10..... | Trace. |
| Apr. 2..... | .01 | 20..... | Trace. | 18..... | .06 | 18..... | .55 |
| 3..... | .03 | 25..... | Trace. | 22..... | .08 | 25..... | .12 |
| 5..... | .30 | 30..... | .08 | 25..... | 1.00 | 30..... | .16 |
| 8..... | .27 | May 1..... | .01 | 26..... | .12 | 31..... | .18 |
| 9..... | .44 | 4..... | 1.21 | 27..... | .97 | Apr. 2..... | Trace. |
| 10..... | Trace. | 5..... | .88 | 28..... | .45 | 3..... | .01 |
| 19..... | .06 | 6..... | .58 | Apr. 8..... | .04 | 4..... | .04 |
| 22..... | .05 | 7..... | Trace. | 9..... | 1.43 | 5..... | .03 |
| 24..... | .06 | 8..... | .03 | 10..... | 1.24 | 6..... | .07 |
| 25..... | Trace. | 11..... | .05 | 11..... | 1.41 | 7..... | 1.44 |
| May 1..... | .02 | 12..... | .07 | 12..... | .30 | 8..... | 1.11 |
| 2..... | .14 | 13..... | .04 | 13..... | .04 | 9..... | .25 |
| 3..... | .02 | 15..... | .58 | 14..... | 1.14 | 10..... | .02 |
| 24..... | .03 | 16..... | .05 | 15..... | .32 | 16..... | .01 |
| June 5..... | Trace. | 31..... | .02 | 23..... | .15 | 17..... | .19 |
| 6..... | .02 | June 1..... | .01 | 24..... | Trace. | 19..... | Trace. |
| 9..... | Trace. | 11..... | Trace. | 26..... | .26 | 26..... | Trace. |
| 18..... | Trace. | Sept. 2..... | Trace. | May 18..... | .10 | 28..... | .01 |
| 19..... | .02 | 21..... | Trace. | 24..... | .12 | May 10..... | Trace. |
| Sept. 30..... | .26 | 29..... | .28 | 25..... | .01 | 12..... | Trace. |
| Oct. 1..... | .20 | 30..... | .14 | June 1..... | Trace. | 13..... | Trace. |
| 3..... | 1.40 | Oct. 22..... | Trace. | 7..... | Trace. | 14..... | .04 |
| 6..... | .29 | 23..... | Trace. | 8..... | .54 | 18..... | Trace. |
| 7..... | .15 | 24..... | .10 | 9..... | .13 | 31..... | Trace. |

Rainfall record of the Signal Service, San Francisco, beginning March 1, 1871—Cont'd.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|--------------|----------------|---------------|----------------|--------------|----------------|---------------|----------------|
| 1885. | <i>Inches.</i> | 1886. | <i>Inches.</i> | 1887. | <i>Inches.</i> | 1888. | <i>Inches.</i> |
| June 4..... | Trace. | Mar. 15..... | Trace. | Feb. 21..... | 0.34 | Feb. 1..... | 0.05 |
| 9..... | 0.09 | 16..... | 0.01 | 24..... | .32 | 10..... | .20 |
| 10..... | .10 | 17..... | .65 | Mar. 1..... | Trace. | 11..... | .24 |
| 21..... | Trace. | 23..... | Trace. | 2..... | .14 | 12..... | .34 |
| July 2..... | .01 | 31..... | .26 | 3..... | .52 | 13..... | Trace. |
| 8..... | .65 | Apr. 1..... | .49 | 4..... | .08 | 14..... | .10 |
| Sept. 5..... | Trace. | 2..... | .03 | 17..... | .06 | 17..... | .01 |
| 24..... | .11 | 6..... | .49 | 18..... | .04 | Mar. 1..... | .90 |
| Oct. 13..... | .40 | 7..... | .24 | Apr. 6..... | .43 | 2..... | .35 |
| 14..... | .31 | 8..... | .08 | 7..... | .02 | 3..... | .18 |
| 16..... | Trace. | 9..... | 1.01 | 8..... | 1.37 | 4..... | 1.21 |
| 29..... | .01 | 10..... | 1.14 | 9..... | .13 | 5..... | .17 |
| Nov. 1..... | .01 | 11..... | .30 | 12..... | .01 | 7..... | .05 |
| 3..... | .03 | 12..... | .36 | 13..... | .04 | 8..... | .02 |
| 4..... | .78 | 13..... | .28 | 14..... | Trace. | 13..... | .15 |
| 7..... | .17 | 15..... | .23 | 19..... | Trace. | 14..... | Trace. |
| 8..... | .03 | 16..... | .32 | 20..... | .25 | 23..... | Trace. |
| 9..... | .45 | 17..... | .31 | 29..... | .05 | 24..... | .02 |
| 10..... | .42 | May 4..... | Trace. | May 6..... | .01 | 29..... | Trace. |
| 14..... | 1.20 | 5..... | .02 | 9..... | .02 | 30..... | .26 |
| 15..... | .86 | 7..... | .21 | 19..... | Trace. | 31..... | .29 |
| 16..... | 1.67 | 8..... | Trace. | 24..... | Trace. | Apr. 3..... | Trace. |
| 17..... | .52 | 9..... | .14 | 31..... | .03 | 4..... | .11 |
| 18..... | .01 | 23..... | Trace. | June 4..... | Trace. | May 3..... | .19 |
| 19..... | .20 | 26..... | Trace. | 13..... | .07 | 4..... | .04 |
| 20..... | .18 | June 4..... | .01 | July 8..... | Trace. | 15..... | .05 |
| 21..... | .51 | July 16..... | .23 | 31..... | Trace. | 24..... | .03 |
| 22..... | Trace. | Sept. 30..... | .01 | Aug. 1..... | .01 | 30..... | .09 |
| 23..... | 2.58 | Oct. 16..... | .72 | Sept. 5..... | .04 | June 1..... | .03 |
| 24..... | .05 | 18..... | .03 | 6..... | .17 | 2..... | .02 |
| 28..... | .04 | 27..... | .08 | 7..... | .01 | 3..... | .01 |
| 29..... | .35 | 28..... | .01 | 21..... | .02 | 6..... | Trace. |
| Dec. 10..... | .29 | 29..... | .04 | 22..... | .05 | 10..... | .02 |
| 14..... | .05 | 30..... | .60 | Nov. 3..... | Trace. | 13..... | .01 |
| 15..... | .02 | Nov. 8..... | Trace. | 4..... | Trace. | 14..... | .06 |
| 16..... | Trace. | 10..... | Trace. | 5..... | .01 | 15..... | .05 |
| 21..... | 2.78 | 11..... | .05 | 6..... | .01 | 17..... | .03 |
| 22..... | .34 | 13..... | .02 | 7..... | Trace. | 19..... | .04 |
| 23..... | .09 | 20..... | .75 | 11..... | Trace. | July 11..... | Trace. |
| 24..... | .59 | 21..... | .02 | 28..... | .40 | 12..... | Trace. |
| 25..... | .33 | Dec. 6..... | .15 | 29..... | .15 | 21..... | .01 |
| 26..... | .48 | 7..... | .47 | 30..... | .42 | Aug. 26..... | .01 |
| 30..... | .02 | 8..... | .98 | Dec. 1..... | .83 | Sept. 10..... | Trace. |
| 1886. | | 9..... | .13 | 2..... | .11 | 11..... | .04 |
| Jan. 12..... | .03 | 11..... | Trace. | 3..... | .07 | 12..... | .01 |
| 13..... | .12 | 22..... | Trace. | 4..... | .08 | 14..... | Trace. |
| 14..... | .01 | 23..... | .14 | 7..... | .03 | 15..... | .02 |
| 15..... | .03 | 28..... | Trace. | 8..... | .10 | 30..... | Trace. |
| 17..... | .11 | 29..... | .16 | 9..... | .03 | Oct. 6..... | .02 |
| 18..... | .44 | 30..... | .04 | 10..... | .01 | 9..... | .01 |
| 19..... | .85 | 1887. | | 12..... | .04 | 17..... | .03 |
| 20..... | .96 | Jan. 12..... | Trace. | 20..... | .64 | 30..... | .05 |
| 21..... | .28 | 13..... | .05 | 29..... | .95 | Nov. 3..... | Trace. |
| 22..... | .52 | 15..... | .05 | 30..... | .28 | 15..... | 1.36 |
| 23..... | 2.35 | 18..... | .02 | 1888. | | 16..... | .81 |
| 24..... | .07 | 19..... | .76 | Jan. 1..... | .79 | 17..... | .96 |
| 25..... | .66 | 20..... | .80 | 2..... | .32 | 18..... | .13 |
| 26..... | .84 | 21..... | .19 | 3..... | 1.43 | 19..... | .01 |
| 27..... | .15 | 24..... | Trace. | 4..... | .62 | 20..... | .01 |
| Feb. 7..... | Trace. | 27..... | .03 | 5..... | .29 | 21..... | .02 |
| 23..... | .01 | Feb. 1..... | .18 | 13..... | .01 | 23..... | Trace. |
| 25..... | Trace. | 2..... | .04 | 16..... | Trace. | 26..... | Trace. |
| 26..... | .02 | 4..... | 2.22 | 17..... | .02 | 29..... | .01 |
| 27..... | .03 | 5..... | 2.92 | 19..... | Trace. | 30..... | .07 |
| 28..... | .18 | 6..... | .01 | 20..... | .93 | Dec. 1..... | .03 |
| Mar. 1..... | .01 | 7..... | .24 | 21..... | .64 | 2..... | .02 |
| 2..... | .08 | 8..... | Trace. | 22..... | .09 | 8..... | .03 |
| 3..... | .15 | 9..... | .12 | 23..... | .10 | 9..... | 1.01 |
| 4..... | .02 | 10..... | .28 | 24..... | .02 | 10..... | .09 |
| 5..... | .02 | 11..... | .50 | 25..... | Trace. | 11..... | .04 |
| 6..... | .03 | 12..... | .79 | 26..... | Trace. | 12..... | Trace. |
| 7..... | .16 | 13..... | .36 | 27..... | .14 | 13..... | 1.51 |
| 8..... | .17 | 14..... | .55 | 29..... | .12 | 14..... | .13 |
| 9..... | .45 | 15..... | Trace. | 30..... | .27 | 15..... | .74 |
| 10..... | .06 | 16..... | .33 | 31..... | 1.02 | 16..... | .05 |
| 13..... | Trace. | 20..... | .04 | | | 17..... | Trace. |

*Rainfall record of the Signal Service and Weather Bureau, San Francisco, beginning
March 1, 1871.*

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|--------------|----------------|--------------|----------------|---------------|----------------|--------------|----------------|
| 1888. | <i>Inches.</i> | 1889. | <i>Inches.</i> | 1890. | <i>Inches.</i> | 1891. | <i>Inches.</i> |
| Dec. 20..... | Trace. | Oct. 23..... | 0.05 | Mar. 2..... | Trace. | Mar. 6..... | 0.01 |
| 21..... | 0.19 | 23..... | .60 | 3..... | Trace. | 10..... | .06 |
| 22..... | .35 | 25..... | .71 | 4..... | 0.29 | 11..... | Trace. |
| 23..... | .10 | 26..... | .72 | 5..... | .04 | 12..... | .02 |
| 24..... | .07 | 27..... | .14 | 6..... | .31 | 15..... | .06 |
| 25..... | Trace. | 28..... | .01 | 7..... | .23 | 16..... | .23 |
| 26..... | 1.09 | 29..... | Trace. | 8..... | .65 | 26..... | .34 |
| 27..... | .11 | 30..... | .02 | 9..... | .16 | 27..... | .06 |
| 29..... | .24 | Nov. 17..... | .38 | 10..... | .02 | 28..... | .08 |
| 1889. | | 18..... | .74 | 18..... | 1.31 | Apr. 5..... | .01 |
| Jan. 3..... | Trace. | 19..... | .58 | 19..... | .72 | 6..... | .74 |
| 4..... | .81 | 20..... | .56 | 22..... | .04 | 7..... | .51 |
| 10..... | Trace. | 21..... | .02 | 23..... | .03 | 8..... | Trace. |
| 11..... | .11 | 22..... | .35 | 25..... | .08 | 9..... | Trace. |
| 12..... | .11 | 29..... | Trace. | 26..... | .23 | 10..... | .41 |
| 17..... | Trace. | 30..... | .27 | 28..... | Trace. | 11..... | .01 |
| 18..... | .14 | Dec. 1..... | .09 | 29..... | .40 | 13..... | .18 |
| 20..... | Trace. | 2..... | .03 | 30..... | .22 | 14..... | .14 |
| 21..... | .10 | 3..... | .36 | Apr. 6..... | .55 | 16..... | .34 |
| 23..... | .01 | 4..... | .51 | 7..... | Trace. | 17..... | .10 |
| Feb. 6..... | .01 | 5..... | 1.44 | 17..... | .01 | 18..... | Trace. |
| 15..... | .03 | 6..... | 1.28 | 18..... | .52 | 19..... | Trace. |
| 16..... | .01 | 7..... | .53 | 19..... | .02 | 23..... | Trace. |
| 18..... | .06 | 8..... | 1.44 | 29..... | .05 | May 3..... | Trace. |
| 23..... | .01 | 9..... | .05 | 30..... | .03 | 6..... | .60 |
| 24..... | .59 | 10..... | .33 | May 7..... | .45 | 7..... | Trace. |
| 25..... | .01 | 11..... | .34 | 8..... | .01 | 14..... | Trace. |
| Mar. 7..... | .39 | 12..... | .70 | 10..... | .45 | 27..... | .52 |
| 8..... | .20 | 17..... | .50 | 11..... | .16 | 28..... | .09 |
| 9..... | .65 | 18..... | .69 | June 17..... | .05 | 29..... | Trace. |
| 10..... | .46 | 19..... | 1.12 | 23..... | .05 | 30..... | .03 |
| 11..... | .03 | 20..... | .26 | July 8..... | .02 | 31..... | .01 |
| 12..... | .95 | 21..... | .81 | Sept. 28..... | Trace. | June 11..... | .10 |
| 13..... | 2.54 | 22..... | 1.24 | 29..... | .29 | 12..... | .01 |
| 14..... | .28 | 23..... | .09 | 30..... | .02 | 17..... | Trace. |
| 15..... | .78 | 24..... | 1.42 | Dec. 3..... | 1.83 | July 8..... | Trace. |
| 16..... | .23 | 25..... | .32 | 4..... | .18 | 9..... | .09 |
| 17..... | .01 | 26..... | .04 | 5..... | .02 | 10..... | Trace. |
| 18..... | .52 | 28..... | .08 | 24..... | .26 | 11..... | .01 |
| 20..... | .68 | 30..... | .14 | 25..... | .17 | Aug. 30..... | .02 |
| 23..... | .01 | 1890. | | 30..... | .79 | Sept. 5..... | Trace. |
| 27..... | .05 | Jan. 1..... | .05 | 1891. | | 9..... | .01 |
| 28..... | Trace. | 2..... | .85 | Jan. 1..... | .06 | 10..... | .01 |
| 29..... | Trace. | 3..... | .37 | 2..... | .15 | 13..... | .08 |
| Apr. 2..... | .08 | 4..... | .36 | 3..... | .26 | 15..... | .04 |
| 3..... | .03 | 5..... | .29 | 4..... | .49 | 22..... | .63 |
| 4..... | .05 | 6..... | .02 | 5..... | Trace. | Oct. 22..... | Trace. |
| 5..... | .04 | 7..... | .01 | 14..... | Trace. | 28..... | .03 |
| 8..... | .30 | 10..... | .03 | 15..... | .01 | 31..... | .01 |
| 9..... | .01 | 12..... | .48 | 17..... | .01 | Nov. 1..... | .05 |
| 10..... | .02 | 13..... | .36 | 18..... | .01 | 5..... | .06 |
| 13..... | .21 | 15..... | .23 | Feb. 1..... | .42 | 18..... | .01 |
| 11..... | Trace. | 16..... | 1.04 | 5..... | .07 | 19..... | .25 |
| 15..... | .22 | 17..... | .45 | 6..... | Trace. | 30..... | .19 |
| 16..... | Trace. | 18..... | .69 | 10..... | .01 | Dec. 1..... | .30 |
| 20..... | Trace. | 19..... | .34 | 11..... | .01 | 3..... | .50 |
| 21..... | Trace. | 20..... | .03 | 12..... | .01 | 4..... | .25 |
| 27..... | Trace. | 21..... | .55 | 14..... | .04 | 8..... | .09 |
| May 2..... | .04 | 22..... | .36 | 15..... | 3.38 | 9..... | .29 |
| 4..... | .15 | 23..... | .16 | 16..... | .54 | 16..... | .48 |
| 5..... | 1.29 | 24..... | .72 | 17..... | .04 | 19..... | .50 |
| 6..... | .43 | 25..... | 1.83 | 18..... | .34 | 23..... | .06 |
| 7..... | .02 | 29..... | .19 | 19..... | .02 | 26..... | Trace. |
| 8..... | .08 | 30..... | .20 | 20..... | Trace. | 27..... | .40 |
| 12..... | .01 | Feb. 4..... | .03 | 21..... | .46 | 28..... | .03 |
| 13..... | .05 | 5..... | .04 | 22..... | .69 | 29..... | 2.21 |
| 14..... | Trace. | 15..... | .07 | 23..... | .22 | 30..... | .40 |
| 15..... | .10 | 16..... | 1.07 | 24..... | .12 | 31..... | .11 |
| June 27..... | .03 | 17..... | .29 | 25..... | .10 | 1892. | |
| July 10..... | .01 | 18..... | .70 | 26..... | .22 | Jan. 1..... | .78 |
| Oct. 7..... | 1.06 | 19..... | 1.27 | 27..... | .18 | 4..... | Trace. |
| 8..... | .01 | 20..... | .74 | 28..... | .39 | 7..... | .37 |
| 17..... | .70 | 21..... | .62 | Mar. 1..... | .68 | 8..... | .09 |
| 18..... | 1.33 | 22..... | .23 | 2..... | .10 | 21..... | .32 |
| 20..... | 1.25 | 24..... | .01 | 3..... | .13 | 26..... | .74 |
| 21..... | .68 | 25..... | .09 | 4..... | Trace. | 27..... | .10 |
| | | | | 5..... | .19 | | |

*Rainfall record of the Signal Service and Weather Bureau, San Francisco, beginning
March 1, 1871—Continued.*

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|---------------|-----------|--------------|-----------|---------------|-----------|--------------|-----------|
| 1892. | Inches. | 1893. | Inches. | 1893. | Inches. | 1894. | Inches. |
| Jan. 30..... | 0.01 | Feb. 1..... | 0.03 | Dec. 26..... | 0.23 | Dec. 4..... | 0.56 |
| 31..... | .01 | 2..... | .19 | 27..... | .06 | 5..... | .60 |
| Feb. 1..... | .30 | 3..... | .09 | | | 6..... | .23 |
| 4..... | .34 | 4..... | .57 | 1894. | | 7..... | .83 |
| 6..... | .39 | 5..... | .28 | | | 8..... | .87 |
| 17..... | .04 | 6..... | .04 | Jan. 1..... | .23 | 10..... | .23 |
| 18..... | 1.03 | 8..... | .36 | 2..... | .40 | 15..... | .10 |
| 19..... | .71 | 9..... | 1.06 | 3..... | .01 | 16..... | .01 |
| 20..... | .05 | 12..... | .13 | 7..... | Trace. | 17..... | .21 |
| 21..... | .01 | Mar. 4..... | .94 | 8..... | Trace. | 18..... | .99 |
| 24..... | .03 | 5..... | .10 | 14..... | .04 | 19..... | 1.21 |
| Mar. 1..... | .26 | 7..... | Trace. | 15..... | 1.84 | 20..... | .14 |
| 2..... | .16 | 8..... | .59 | 16..... | .08 | 21..... | 1.19 |
| 13..... | .45 | 10..... | .08 | 17..... | .22 | 22..... | .16 |
| 18..... | .47 | 11..... | .98 | 18..... | .15 | 23..... | Trace. |
| 19..... | .22 | 12..... | .04 | 19..... | .02 | 27..... | .30 |
| 20..... | .06 | 14..... | .01 | 20..... | 2.61 | 28..... | .39 |
| 22..... | .01 | 15..... | .10 | 21..... | .16 | 29..... | .37 |
| 23..... | .01 | 16..... | .05 | 22..... | .17 | 30..... | .02 |
| 27..... | .29 | 18..... | .06 | 29..... | .05 | 31..... | .37 |
| 29..... | .72 | 19..... | .36 | 30..... | .01 | | |
| 30..... | .20 | 20..... | .52 | Feb. 5..... | .50 | 1895. | |
| Apr. 1..... | .26 | 21..... | .15 | 7..... | .09 | | |
| 2..... | .02 | 23..... | .07 | 8..... | .03 | Jan. 3..... | Trace. |
| 14..... | .18 | 24..... | .02 | 9..... | .07 | 4..... | 1.96 |
| 15..... | .05 | 29..... | Trace. | 10..... | .14 | 5..... | .15 |
| 17..... | .06 | 30..... | .01 | 11..... | .01 | 6..... | .06 |
| 21..... | .38 | Apr. 2..... | Trace. | 12..... | Trace. | 8..... | .82 |
| 22..... | Trace. | 3..... | Trace. | 15..... | .38 | 9..... | .01 |
| 24..... | .08 | 5..... | .23 | 16..... | .05 | 13..... | .45 |
| 29..... | .26 | 6..... | .49 | 17..... | .10 | 16..... | 1.40 |
| 30..... | .10 | 7..... | .01 | 18..... | .14 | 17..... | .61 |
| May 1..... | .19 | 8..... | .03 | 19..... | .85 | 18..... | .44 |
| 2..... | .07 | 9..... | Trace. | 20..... | .33 | 19..... | .11 |
| 4..... | .01 | 10..... | .10 | Mar. 2..... | .34 | 20..... | Trace. |
| 5..... | .02 | 11..... | .04 | 5..... | .08 | 21..... | .32 |
| 6..... | .32 | 22..... | .13 | 6..... | .10 | 22..... | .63 |
| 7..... | .02 | 24..... | Trace. | 7..... | .02 | 23..... | .03 |
| 10..... | .08 | 27..... | Trace. | 8..... | Trace. | Feb. 10..... | .06 |
| 15..... | 1.15 | May 1..... | Trace. | 9..... | .02 | 11..... | .96 |
| June 12..... | Trace. | 2..... | Trace. | 16..... | .04 | 12..... | .91 |
| 13..... | Trace. | 3..... | Trace. | 18..... | Trace. | 13..... | .10 |
| Sept. 29..... | .02 | 8..... | Trace. | 27..... | Trace. | 21..... | Trace. |
| Oct. 6..... | .05 | 15..... | Trace. | 29..... | Trace. | 22..... | .19 |
| 9..... | .26 | 16..... | .04 | 30..... | Trace. | 23..... | .09 |
| 16..... | .91 | 17..... | .11 | Apr. 22..... | .01 | Mar. 11..... | Trace. |
| 27..... | Trace. | 20..... | Trace. | 23..... | Trace. | 12..... | Trace. |
| 28..... | .02 | June 9..... | Trace. | 25..... | .19 | 13..... | .02 |
| 30..... | .33 | 22..... | .03 | 26..... | .27 | 14..... | .01 |
| 31..... | .08 | July 26..... | .02 | 27..... | .03 | 16..... | Trace. |
| Nov. 23..... | .35 | Sept. 6..... | .02 | May 14..... | .29 | 17..... | .10 |
| 25..... | .31 | 8..... | .07 | 15..... | Trace. | 18..... | .05 |
| 26..... | .05 | 10..... | Trace. | 20..... | Trace. | 20..... | .67 |
| 27..... | .88 | 11..... | .12 | 21..... | .12 | 21..... | .04 |
| 28..... | .62 | 9..... | .10 | 25..... | .63 | 22..... | .20 |
| 29..... | .39 | 15..... | .02 | 26..... | .05 | 26..... | Trace. |
| 30..... | 1.31 | 30..... | .04 | 27..... | .21 | 27..... | .35 |
| Dec. 1..... | .06 | Nov. 5..... | .02 | 31..... | .01 | 28..... | .45 |
| 2..... | 1.22 | 6..... | .10 | June 1..... | Trace. | Apr. 1..... | .01 |
| 3..... | 1.30 | 7..... | .01 | 2..... | .20 | 10..... | .02 |
| 4..... | .18 | 21..... | .03 | 3..... | .02 | 13..... | .09 |
| 20..... | .01 | 22..... | .01 | 4..... | .17 | 24..... | Trace. |
| 22..... | .04 | 23..... | .06 | 16..... | .15 | 25..... | Trace. |
| 23..... | .26 | 24..... | 1.26 | 17..... | .02 | 26..... | .37 |
| 24..... | 1.14 | 25..... | .03 | July 10..... | Trace. | 27..... | .54 |
| 25..... | .57 | 26..... | 1.69 | Sept. 29..... | .68 | 28..... | .21 |
| 26..... | .30 | 27..... | .37 | 30..... | .37 | May 1..... | .26 |
| 27..... | Trace. | 28..... | .09 | Oct. 17..... | Trace. | 2..... | .01 |
| | | 29..... | .30 | 18..... | .58 | 3..... | Trace. |
| 1893. | | 30..... | .21 | 19..... | .02 | 4..... | .04 |
| Jan. 14..... | Trace. | Dec. 1..... | Trace. | 20..... | .45 | 5..... | Trace. |
| 15..... | .27 | 13..... | Trace. | 21..... | .04 | 6..... | Trace. |
| 16..... | .05 | 14..... | .50 | 23..... | .64 | 25..... | Trace. |
| 26..... | .66 | 21..... | .97 | Nov. 26..... | Trace. | 26..... | .14 |
| 27..... | .64 | 22..... | .04 | 27..... | .88 | 27..... | .07 |
| 28..... | .04 | 23..... | .01 | Dec. 1..... | .03 | 28..... | .08 |
| 30..... | 1.39 | 24..... | .43 | 2..... | .18 | July 1..... | Trace. |
| | | 25..... | .01 | 3..... | .02 | 4..... | Trace. |

*Rainfall record of the Signal Service and Weather Bureau, San Francisco, beginning
March 1, 1871—Continued.*

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|--------------|----------------|---------------|----------------|--------------|----------------|--------------|----------------|
| 1895. | <i>Inches.</i> | 1896. | <i>Inches.</i> | 1897. | <i>Inches.</i> | 1897. | <i>Inches.</i> |
| July 5..... | 0.01 | Apr. 14..... | 0.09 | Jan. 25..... | Trace. | Oct. 23..... | 1.41 |
| Sept. 3..... | Trace. | 15..... | .14 | 27..... | 0.18 | Nov. 3..... | Trace. |
| 9..... | Trace. | 16..... | .01 | 28..... | .09 | 4..... | .23 |
| 10..... | .09 | 19..... | Trace. | 29..... | .77 | 5..... | .01 |
| 11..... | .09 | 21..... | .22 | 30..... | .04 | 6..... | .03 |
| 12..... | .56 | 22..... | .02 | 31..... | 1.08 | 13..... | Trace. |
| 13..... | .03 | 23..... | .69 | Feb. 1..... | 1.23 | 14..... | .01 |
| 15..... | .06 | 24..... | 1.90 | 2..... | .04 | 20..... | .11 |
| 16..... | .01 | 25..... | .10 | 3..... | .42 | 23..... | .42 |
| 19..... | Trace. | 26..... | .13 | 4..... | .66 | 24..... | .22 |
| 20..... | .01 | 29..... | .09 | 5..... | .61 | 25..... | .02 |
| 21..... | .03 | May 1..... | Trace. | 6..... | .01 | Dec. 6..... | Trace. |
| Nov. 3..... | .19 | 3..... | Trace. | 7..... | .36 | 7..... | .75 |
| 4..... | .04 | 4..... | .04 | 11..... | .02 | 8..... | .27 |
| 5..... | 1.04 | 5..... | Trace. | 12..... | .03 | 9..... | .01 |
| 6..... | .02 | 7..... | Trace. | 13..... | .17 | 10..... | Trace. |
| 10..... | Trace. | 11..... | .27 | 14..... | .02 | 11..... | .07 |
| 12..... | Trace. | 20..... | Trace. | 15..... | Trace. | 14..... | .12 |
| 27..... | .26 | 21..... | .33 | 16..... | .06 | 24..... | Trace. |
| 28..... | .12 | 22..... | .03 | 17..... | .01 | | |
| 29..... | .11 | 23..... | .05 | 18..... | .27 | 1898. | |
| 30..... | Trace. | 30..... | Trace. | 19..... | .39 | Jan. 6..... | .32 |
| Dec. 1..... | Trace. | July 10..... | .04 | 20..... | .09 | 7..... | .02 |
| 5..... | .09 | 24..... | Trace. | 28..... | .01 | 8..... | Trace. |
| 6..... | .11 | 25..... | Trace. | Mar. 1..... | .38 | 11..... | .31 |
| 15..... | .13 | Aug. 18..... | .01 | 2..... | .88 | 12..... | .02 |
| 16..... | .02 | 19..... | .02 | 3..... | .36 | 15..... | .25 |
| 17..... | .13 | 28..... | Trace. | 4..... | Trace. | 16..... | Trace. |
| 18..... | .01 | 30..... | .06 | 5..... | .27 | 17..... | .09 |
| 19..... | .33 | Sept. 15..... | .02 | 6..... | .74 | 19..... | .03 |
| 20..... | .27 | 18..... | .01 | 7..... | .15 | 22..... | Trace. |
| 21..... | .34 | 19..... | .08 | 8..... | .12 | 24..... | Trace. |
| 23..... | Trace. | 22..... | .40 | 9..... | .01 | 25..... | .07 |
| 24..... | Trace. | 23..... | .01 | 16..... | Trace. | 31..... | Trace. |
| 1896. | | Oct. 10..... | Trace. | 17..... | .04 | Feb. 1..... | .20 |
| Jan. 13..... | .56 | 11..... | .01 | 18..... | .08 | 3..... | .02 |
| 14..... | .17 | 24..... | Trace. | 19..... | .03 | 5..... | .08 |
| 15..... | .28 | 25..... | Trace. | 20..... | .03 | 6..... | .17 |
| 16..... | .46 | 26..... | .54 | 25..... | Trace. | 7..... | .19 |
| 17..... | .98 | 27..... | .94 | 27..... | .10 | 8..... | Trace. |
| 18..... | 1.18 | 29..... | .04 | 28..... | 1.33 | 12..... | .01 |
| 19..... | .04 | 31..... | .02 | 29..... | Trace. | 20..... | Trace. |
| 20..... | 1.01 | Nov. 8..... | Trace. | 31..... | .04 | 21..... | .44 |
| 21..... | .21 | 9..... | .31 | Apr. 1..... | .20 | 24..... | .78 |
| 23..... | .52 | 10..... | Trace. | 4..... | Trace. | 25..... | .02 |
| 25..... | .68 | 11..... | Trace. | 6..... | .03 | 26..... | .01 |
| 26..... | .53 | 16..... | .01 | 18..... | Trace. | 27..... | .21 |
| 27..... | 1.35 | 17..... | .24 | 19..... | .04 | Mar. 7..... | .05 |
| 28..... | .15 | 19..... | .14 | 13..... | Trace. | 8..... | .08 |
| Feb. 1..... | .18 | 20..... | .44 | 14..... | Trace. | 14..... | Trace. |
| 21..... | .01 | 21..... | Trace. | 15..... | Trace. | 15..... | .04 |
| 26..... | Trace. | 22..... | .31 | 16..... | .02 | 16..... | .03 |
| 27..... | .01 | 23..... | 2.00 | 17..... | .59 | 17..... | Trace. |
| 28..... | .05 | Dec. 12..... | Trace. | June 14..... | .03 | 25..... | .04 |
| 29..... | .03 | 13..... | .28 | 19..... | .03 | Apr. 2..... | Trace. |
| Mar. 2..... | .55 | 14..... | .02 | 20..... | .16 | 6..... | .19 |
| 3..... | .45 | 15..... | .07 | 21..... | Trace. | May 1..... | Trace. |
| 4..... | .07 | 16..... | 1.65 | 22..... | Trace. | 4..... | Trace. |
| 5..... | .25 | 17..... | Trace. | 24..... | Trace. | 5..... | Trace. |
| 6..... | .05 | 18..... | .02 | 25..... | Trace. | 12..... | Trace. |
| 14..... | Trace. | 19..... | Trace. | 26..... | Trace. | 13..... | .03 |
| 15..... | .32 | 23..... | .02 | July 22..... | Trace. | 14..... | .35 |
| 16..... | .74 | 24..... | Trace. | Aug. 3..... | Trace. | 15..... | .89 |
| 19..... | Trace. | 26..... | .53 | 9..... | Trace. | 16..... | .04 |
| 20..... | .03 | 27..... | .79 | 15..... | Trace. | 21..... | .01 |
| 21..... | .02 | 28..... | .11 | Sept. 3..... | .02 | 22..... | .06 |
| 22..... | .10 | 29..... | Trace. | 25..... | Trace. | 26..... | Trace. |
| 23..... | .01 | 30..... | .56 | 26..... | Trace. | 27..... | .03 |
| 26..... | .16 | 31..... | .29 | 28..... | Trace. | 28..... | .03 |
| 27..... | .10 | 1897. | | 30..... | .08 | 31..... | Trace. |
| Apr. 5..... | .91 | Oct. 1..... | Trace. | Oct. 1..... | Trace. | June 1..... | .18 |
| 6..... | .53 | 5..... | Trace. | 5..... | Trace. | 8..... | Trace. |
| 9..... | .24 | 6..... | Trace. | 6..... | Trace. | 9..... | .01 |
| 10..... | .06 | 12..... | Trace. | 12..... | Trace. | 10..... | Trace. |
| 12..... | Trace. | 13..... | .01 | 21..... | .27 | 11..... | Trace. |
| 13..... | .02 | 20..... | Trace. | 22..... | .01 | Aug. 2..... | Trace. |
| | | 24..... | .06 | | | 3..... | Trace. |

Rainfall record of the Signal Service and Weather Bureau, San Francisco, beginning March 1, 1871—Concluded.

| Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. | Date. | Rainfall. |
|---------------|----------------|--------------|----------------|-------------|----------------|-------------|----------------|
| 1898. | | 1898. | | 1899. | | 1899. | |
| | <i>Inches.</i> | | <i>Inches.</i> | | <i>Inches.</i> | | <i>Inches.</i> |
| Sept. 22..... | 0.09 | Dec. 20..... | 0.32 | Feb. 2..... | Trace. | Apr. 2..... | Trace. |
| 24..... | Trace. | 29..... | .01 | 3..... | 0.02 | 18..... | Trace. |
| 25..... | .73 | | | 28..... | Trace. | 23..... | 0.03 |
| 26..... | .24 | 1899. | | Mar. 1..... | .22 | 24..... | .45 |
| Oct. 2..... | .24 | | | 2..... | .01 | 25..... | .05 |
| 6..... | Trace. | Jan. 1..... | .47 | 8..... | .02 | 27..... | .03 |
| 7..... | .45 | 2..... | .22 | 9..... | Trace. | 30..... | .06 |
| 9..... | Trace. | 3..... | .03 | 11..... | .01 | May 22..... | Trace. |
| 22..... | Trace. | 6..... | .03 | 14..... | .21 | 24..... | .10 |
| 23..... | .12 | 7..... | .93 | 15..... | .95 | 29..... | Trace. |
| 30..... | Trace. | 9..... | .22 | 16..... | .93 | 31..... | .76 |
| 31..... | .05 | 10..... | .78 | 19..... | .38 | June 1..... | .01 |
| Nov. 19..... | .24 | 11..... | .27 | 20..... | .23 | 19..... | Trace. |
| 20..... | .12 | 12..... | Trace. | 21..... | .11 | 24..... | Trace. |
| 22..... | .04 | 13..... | .22 | 22..... | 2.15 | 26..... | Trace. |
| 23..... | Trace. | 14..... | .21 | 23..... | 1.48 | Aug. 7..... | Trace. |
| 29..... | .06 | 15..... | .29 | 24..... | .87 | 11..... | Trace. |
| Dec. 13..... | Trace. | 16..... | Trace. | 25..... | .01 | | |
| 14..... | .59 | 17..... | Trace. | 28..... | Trace. | | |
| 19..... | .70 | Feb. 1..... | .08 | 29..... | .03 | | |

